Economic Growth, Food Security,

And

Enterprise Development

Sector Assessment

For

USAID/Eritrea

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Preface

At the request of USAID/Eritrea, a team from Chemonics International visited Eritrea and prepared this assessment and accompanying thought piece to assist the Mission in the preparation of its new Integrated Strategic Plan (ISP) for 2003-2008.

The first part of this report is a formal assessment of the Investment Objective 2 (IO2), the Enterprise Development IO, and particularly the Rural Enterprise Investment Partnership (REIP). The REIP has been an important part of the total IO2 and has been seriously handicapped by effects of the war with Ethiopia and its aftermath, and fraught with problems of staffing, use of technical assistance, and direction.

The second part of the report is a less formal presentation of ideas and views describing opportunities for promoting economic growth in post-conflict Eritrea. It suggests an expansion of the economic growth SO, focusing SO activities on agriculture and particularly on the agribusiness subsector and food security. It is meant as a contribution, by no means the only one, to the debate on the direction and content of USAID/Eritrea's development assistance and further deliberations as the Mission prepares its new ISP.

The team's work was conducted over an intense four weeks, including field trips. After receiving basic documents and undergoing a brief orientation in Chemonics headquarters, the team traveled to Eritrea where it met with USAID staff, reviewed additional documents, discussed progress with a range of implementing partners throughout the program, talked to other donor and government representatives, and went on field trips. These activities were undertaken collectively and individually, as appropriate.

The reader is referred to the USAID/Eritrea Integrated Strategic Plan 2003-2008 Concept Paper for the basic strategic concepts and background.

The visiting team enjoyed excellent support throughout the USAID at all levels. In particular, it wishes to thank the Director, and the Enterprise Development IO Team Leader, and the Enterprise Development team and for their availability, cooperation and support.

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ACRONYMS

ABC	Agricultural Business Center
ABD	African Development Bank
ACDI/VOCA	Agricultural Cooperative Development International/Volunteers in Overseas Cooperative Assistance
ACORD	Agency for Cooperation in Research and Development
AGOA	U.S. African Growth and Opportunity Act
AMAP	Accelerated Microenterprise Advancement Project
ASARECA	Associations for Strengthening Agricultural Research in Eastern and Central Africa
BDS	Business Development Services
CBER	Commercial Bank of Eritrea
CRSP	Collaborative Research Support Project
CSCA	Community-Based Savings and Credit Association
DANIDA	Danish Agency for Development Assistance
DAP	Diammonium Phosphate (fertilizer)
DCA	Development Credit Authority
EDIB	Eritrean Development and Investment Bank
EIF	Enterprise Investment Fund
ELAIA	Eritrean Leather and Allied Industry Association
EOP	End of Project
ERCS	Emergency Reconstruction Credit Scheme
ERN	Eritrean Nacfa (currency)
EWDFA	Eritrean War Disabled Fighters Association
FAO	Food and Agriculture Organization of the United Nations
FEWS	Famine Early Warning Systems
FEWS NET	Famine Early Warning Systems Network
GDP	Gross Domestic Product
GOE	Government of the State of Eritrea
ICARDA	International Center for Agricultural Research in the Dry Areas
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics

IFS	Integrated Farming Systems
IGAD	Intergovernmental Authority on Development
ILO	International Labor Organization
INSORMIL	Sorghum/Millet (CRSP)
IO	Investment Objective
IQC	Indefinite Quantity Contract
IR	Intermediate Result
ISP	Integrated Strategic Plan
IYB	Improving Your Business (ILO training module)
MoA	Ministry of Agriculture
MED	Microenterprise Development
NARS	National Agricultural Research Systems
NFIS	National Food Information Systems
NGO	Non-Governmental Organization
OFDA	US Office of Foreign Disaster Assistance
PFDJ	Peoples Front for Democracy and Justice
PAR	Portfolio at Risk
PLWHA	Persons Living with HIV/AIDS
PMU	Project Management Unite
PVO	Private Voluntary Organization
REIP	Rural Enterprise Investment Partnership
REU	Rural Enterprise Unit
SFCS	Semhar Fishing Cooperative Society
SG 2000	Sasakawa Global 2000
SME	Small and Medium Enterprise
SO	Strategic Objective
SPFS	Special Programme for Food Security
TOT	Training-of-Trainers
UNDP	United Nations Development Program
UNMEE	United Nations Mission in Ethiopia and Eritrea
USAID	U.S. Agency for International Development

Executive Summary

1. Purpose of the Assessment

USAID/Eritrea is preparing a new Integrated Strategic Plan (ISP) for the 2003-2008 period. All three components of the Mission's portfolio — Health (IO1), Enterprise Development (IO2) and Human Capacity Development (IO3) — are being revised in the process of preparing the new ISP. USAID/Eritrea contracted Chemonics International Inc. under the GBTI-IQC to undertake an assessment of the Enterprise Development (IO2) program. The purpose of this sector assessment is two-fold. The first is to conduct an evaluation of the Enterprise Development (IO2) program as originally designed and implemented, including continued support to the REU. The second is to identify and describe the opportunities for promoting economic growth in post-conflict Eritrea under an expanded SO by focusing on agriculture and rural activities, particularly the agribusiness subsector.

2. The Rural Enterprise Investment Partnership

The Rural Enterprise Investment Partnership (REIP) program began in 1995 as an unsolicited proposal from ACDI/VOCA to USAID/Eritrea. This resulted in a cooperative agreement signed in September 1996, with implementation beginning the following month. The proposal included a $9.0 million Enterprise Investment Fund (EIF) to be used as a line of credit to the Commercial Bank of Eritrea (CBER) to promote enterprise development and provide foreign exchange to rural enterprises requiring imported equipment. The enterprise development activities were intended to improve competitiveness, generate income and foreign exchange, and create employment and income diversification opportunities for rural populations.

The program was to be coordinated and managed by an ACDI/VOCA staffed Rural Enterprise Unit (REU), which was to provide technical assistance as well as undertake subsector studies, provide market information, and help entrepreneurs make marketing contacts. It also had responsibility for facilitating the establishment of a business development services (BDS) program that would train trainers to provide BDS services and training to entrepreneurs, cooperatives, and producer associations. However, this vision was never implemented. The investment partnership agreement between USAID and the Government of the State of Eritrea (GOE), signed one year after ACDI/VOCA began program implementation, revised the approach and stipulated that the REU and the EIF would be placed under the direct supervision of the GOE. U.S. government regulations prevented disbursement of funds to a government involved in hostilities. An alternative disbursement mechanism was devised to allow funds to be disbursed through ACDI/VOCA to the CBER and the GOE staffed, quasi-public REU. Much of the program depended on the REU leadership and coordination, but as established it had little capacity or institutional status and received only limited technical assistance while retaining the many functions it was originally assigned. This included the functions of a project management unit, even though it had no power over the CBER except as the de facto secretariat for the REIP Advisory Board.

Any assessment of the REIP must recognize that the conditions under which the program was implemented have been anything but normal. The delay between signing the cooperative agreement with ACDI/VOCA and the investment partnership agreement with the GOE, and the eventual incompatibility between the two, disrupted implementation during the first year. Hostilities with Ethiopia broke out only six months after the bilateral agreement was signed, and stalled implementation for most of the next three years. The war resulted in: the evacuation of the ACDI advisor to the CBER; the closing, damage or destruction of CBER and REU offices in target areas; and the drafting of CBER's newly trained loan officers and much of the CBER and REU staff. The war and military mobilization also disrupted most sectors of the economy and business, making it difficult to find enterprises with viable business plans that might qualify for loans.

The results of the Ethiopian invasion in mid-2000, particularly the economic disruption due to the destruction of businesses and economic infrastructure caused USAID to activate the Crisis Modifier built into its Country Development Strategy. This Crisis Modifier placed $5 million of the $9 million EIF funds in the Emergency Reconstruction Credit Scheme (ERCS). The rapid disbursement of this $5 million ERCS program to viable enterprises capable of playing a role in economic recovery and repaying the credit is probably the major success of the REIP program to date. The Crisis Modifier also caused a significant portion of the technical assistance funding intended to benefit the REU to be transferred to other emergency reconstruction activities.

The EIF loan facility was replenished in March 2001 and began disbursing loans in November 2001. As of July 31, 2002 it had disbursed 18 loans worth $692,286, of which 85 percent went to agricultural enterprises, and the rest to trade and service or manufacturing. Gash Barka and Debub offices continued disbursing the more favorable (to the borrower) ERCS loans through July 2002, so comparisons are difficult. But at that point the EIF had disbursed only about 1/5 the loan volume per month as compared to the ERCS. While both the CBER and the REU suffer from the loss of personnel to the military, some of the slowness is due to the involvement of both institutions in vetting the loans.

Key REIP Recommendations

1. Introduce competition between banks.
2. Use a guarantee fund mechanism to leverage bank liquidity and to induce banks to assume more risk.
3. Support agricultural credit windows in participating banks.
4. Eliminate the REU role in preparing loan applications, analyzing credit, and supervising loans.
5. Provide business development services that train service providers as intermediaries and entrepreneurs to prepare business plans that they understand and can implement (rather than the REU preparing business plans for entrepreneurs).
6. Make market and marketing information a critical part of subsector studies.
7. Use qualified expatriate technical assistance to staff the REU, provide training, and build its capacity to provide business development services and agricultural business center services.
8. The REU does not have the capacity or institutional status to serve as an effective and functional Project Management Unit (PMU). The REIP should be reorganized to

provide an effective and functional PMU that can make and enforce implementation decisions. The Advisory Board should serve the role of a steering committee that decides broad policy and project direction.

3. Agricultural Subsectors with Opportunities for Economic Growth

To focus resources and achieve maximum impact the Assessment Team recommends that USAID/Eritrea adopt a subsector (filière or commodity chain) approach. Experience in other countries demonstrates that addressing the constraints throughout an entire subsector is more likely to produce increased product volume and efficiency, resulting in profits for participants, lower consumer prices and improved competitiveness in export markets. The approach should also be participatory, allowing stakeholders in the subsector to identify problems and potential solutions to those constraints. USAID/Eritrea may wish to target subsectors within the agricultural sector for reasons of effective management and coordination with other donor programs.

The Assessment Team has identified a number of agricultural subsectors, that appear to provide opportunities for economic growth and increased food security. Some, such as hides and fisheries, have interesting export potential; others like poultry and dairy have primarily domestic potential. Subsectors such as poultry an dairy and fruit and vegetable production have significant potential for improving household incomes and nutrition, diversifying income and nutrition sources, and eventually impacting regional or national food security and nutrition. Eritrea would benefit greatly from increased production of cereal crops and other basic staples to improve food security. However, semi-arid climatic conditions, lack of dryland farming technologies, and prices moderated by large-scale commercial and concessional food imports result in conditions under which it is difficult to consistently produce cereal crops and other basic staples profitably.

While increasing exports may contribute to macroeconomic stability, the short-term export prospects in the agricultural sector are rather limited, with the exception of fisheries, preserved (wet blue) hides, lint cotton, and possibly live animals or ornamental horticulture. The international markets for fruits and vegetables demand high-quality produce supplied on a reliable schedule. Eritrean horticultural enterprises need to first target and win domestic high-quality niche markets to gain the experience necessary to become competitive in export markets.

While one of the stated long-term roles of the government is to establish transparency and good governance in public sector management, there is a common perception that the Peoples Front for Democracy and Justice (PFDJ) owns numerous companies active in the “private sector.” Party ownership of companies is not transparent to the public, and entrepreneurs are loath to invest in any sector where they will face competition from party-owned companies. The fear of unfair competition from party-owned companies is a strong deterrent to investment in Eritrea, by foreign and local entrepreneurs as well as member of the diaspora.

Key Agricultural Subsector Recommendations

1. A subsector approach should be adopted by USAID/Eritrea to identify where to provide support and funding for enterprise development activities. The impacts on the domestic

economy and food security as well export potential should be analyzed in choosing subsectors to support.

2. Subsector studies and activities should place an emphasis on markets and market information and providing much of the information needed for feasibility studies by individual enterprises in the sector.
3. USAID/Eritrea should explore the possibility with the GOE of increased privatization of parastatals and party-owned companies, particularly those in targeted subsectors, to increase the potential for private sector investment.

4. Microenterprise Component

USAID initiated the microenterprise component as part of the emergency reconstruction activities under the Crisis Modifier. The underlying goal of USAID/Eritrea is to provide assistance to vulnerable rural households in achieving food security, by means of a strategy of supporting those vulnerable groups, predominantly women, to develop and run viable microenterprises. Providing support to the CARE Community Based Savings and Credit Association Project served as a means of reaching these vulnerable populations. The clients served by this program are largely vulnerable women who have been assisted by the program to start and operate microenterprises outside their homes for the first time. With access to savings and credit, they have been able to establish and run enterprises for which they control the income earned and assets. Most of the women interviewed would have had no effective means of starting these enterprises without this assistance. This is a target group that does not seem to be targeted by other providers in the hierarchy of Eritrean credit institutions. The real impact here is the introduction of a strong, new methodology to reach very poor women, who are the key to helping vulnerable households increase incomes and achieve greater food security.

In the CARE project groups, about 60 percent of the members are women, all of the women are savers, and about 60 percent are borrowers at any one time. Average group sizes are 15-20 members in rural areas and about 45 members in urban areas. The CARE methodology is based upon member-managed savings and credit services. The women self-organize their groups, and decide among themselves how much they will save each week as well as how their savings will be used to make loans to group members. In the CARE/Vision Eritrea groups visited by the Assessment Team, this seemed to generate a strong sense of “ownership” in the group and its activities. Experience with similar methodologies, used in other countries to reach the target group of very vulnerable women, indicates that this cohesiveness and sense of ownership enhances the long-term sustainability of the groups as financial services providers.

Along with its savings and credit program, CARE has been offering business development (advisory) services to women in their groups, providing training in setting up a microenterprise, simple accounting and funds management. Building on this experience, CARE is looking at opportunities to help women expand and strengthen subsectoral activities in agriculture — in areas where they want to invest and can contribute to economic growth. This kind of market activity carries the potential for linking women’s income generating activities to providers of inputs and vital technical services, and eventually helping to “mainstream” women in the larger economy.

Key Microenterprise Recommendations

1. USAID/Eritrea should expand microenterprise activities similar to the Community Based Savings and Credit Association Project.
2. Microenterprise activities should continue to target vulnerable populations.
3. The microenterprise activities should be accompanied by and used as a mechanism to diffuse health, nutrition, family planning, and HIV/AIDS messages to rural women and incorporate the participation of Ministry of Agriculture (MoA) home economy agents when practical.
4. Grant funding should be made available for expansion and consolidation of this approach to allow the initiative to scale up to reach many more beneficiaries with services and achieve operating sustainability.
5. Care should be taken to link microenterprise participants in subsectors targeted for enterprise development initiatives to those subsector activities.

5. Public Sector Food Security Management

Food security is a very difficult problem in Eritrea. On average, Eritrea produces only about 40 percent of its basic food needs, and the value of Eritrean exports covers only a small portion of the total value of imports. With both agricultural production and export earnings prospects severely constrained, Eritrea will be dependent on food aid for the foreseeable future.

Although there are a number of constraints to domestic food production, the primary constraint is lack of water. More than 99 percent of Eritrea is classified as arid or semi-arid. Even in the semi-arid areas, rainfall is highly variable and often inadequate for rainfed agriculture to be productive. Eritrea faces perhaps as many as 3 or 4 years out of 10, when rainfed agricultural production may fail. Given this high level of risk, for all practical purposes, farmers cannot afford to invest in agricultural intensification in the absence of improved water management; thus rainfed agriculture remains extensive and yields remain relatively low. In years of low rainfall, even fertilizer may burn the crop rather than having its expected positive impact on productivity. Water harvesting and water conservation techniques or other aspects of dryland farming systems may reduce the risk of crop failure directly, as well helping ensure that other technologies such as the use of fertilizer do increase productivity. For all of these reasons, improving water management would appear to be the key to improving food production and the productivity of rainfed agriculture in Eritrea. The high risk and low reward (involving both low productivity and moderate prices) are strong disincentives to investment in rainfed agriculture by commercial enterprises.

Water availability and improving water management appear to be the key issues with regard to increased food production and food security in Eritrea. However, USAID/Eritrea is not likely to have sufficient resources to undertake a major program addressing the water issues, particularly given its existing commitment to enterprise development and microenterprise. It might consider a pilot project to exploit the knowledge of sustainable groundwater sources developed by an American company in reaction to the Ethiopian drought and famine in the 1980s.

At present, USAID is involved in the public sector food security management area primarily through the donation of food aid and support for regional and national level Famine Early

Warning Systems (FEWS) activities. Another area critical to increasing food production and food security in Eritrea is the liberalization of cereal prices. This is an issue about which USAID has extensive experience. For a relatively modest investment, it can make a significant contribution to capacity building and policy analysis at the Grain Board. USAID can also expect significant impact for a modest investment by helping address the striga issue. The sorghum and millet Collaborative Research Support Program (INSORMIL CRSP) has striga resistant cultivars that can be used to breed striga resistant varieties. These highly desirable varieties might also provide a means for involving the private sector in seed production.

Eritrean public sector food security management could greatly benefit from USAID support. Strategically, the two areas with the potential to have the greatest impact are improved water management and increased liberalization of cereal markets. The Assessment Team believes there is great need for improved water management in irrigated and rainfed agriculture. However, the team recognizes that USAID/Eritrea may not have sufficient resources to open another major program area in addition to its commitment to enterprise development and microenterprise activities. Therefore, many of the recommendations below are focused on areas that are of secondary importance strategically, but in which USAID has proven experience and comparative advantage.

Key Public Sector Food Security Management Recommendations

1. Provide capacity building and technical assistance to the Grain Board, to move toward greater liberalization of cereal markets and improve its effectiveness in addressing the contradiction between grain price stabilization policies and policies to improve incentives for farmers to increase cereal production.
2. Continue support to FEWS NET and its relationship with regional mapping and famine monitoring services of the Intergovernmental Authority on Development (IGAD) to help forecast harvest results and food needs in Eritrea in a manner that is both transparent and consensual. Given concerns for the lack of information sharing and transparent forecasts at National Food Information Systems (NFIS), USAID/Eritrea should consider allowing FEWS NET to establish an office independent of the NFIS.
3. Long-term efforts to reduce the risks of rainfed agriculture and soil erosion under semi-arid (dryland farming) conditions should be supported, in particular, efforts to expand water harvesting, water conservation, and spate irrigation and also efforts to protect against wind erosion. Consider funding support to the Eritrean agricultural research system by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and International Center for Agricultural Research in the Dry Areas (ICARDA) and participation of Eritrea's National Agricultural Research System (NARS) in the regional networks of the Associations for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) to help provide access to needed technologies. Other forms of irrigation should be supported in the context of producing high-value products that can pay for the irrigation infrastructure. Where and if feasible, the use of water conserving irrigation technologies should be encouraged.
4. USAID/Eritrea should facilitate making available the results of mapping groundwater resources funded by The U.S. Office of Foreign Disaster Assistance (OFDA), which identify high-output rechargeable aquifers. Pilot activities to develop these resources might make a key contribution to emergency drought relief efforts.

5. Support the development of striga resistant sorghum varieties as a target of opportunity that takes advantage of the capacity developed by Purdue University and the INSORMIL CRSP. Leverage the expected popularity of these striga resistant sorghum varieties by entering into negotiations with the MoA to facilitate the development of a private sector seed production industry, based on the multiplication of these varieties.

6. Cross-Cutting Issues

Poverty Alleviation

Given the climatic constraint and the fact that Eritrea has historically produced only about 40 percent of its basic food needs, it is unlikely that the country will achieve food security within the time frame of USAID/Eritrea's new ISP. Potential solutions (other than food aid) to the food security problem are long-term, expensive, and not presently within the manageable interest of USAID. However, all three programming clusters or Intermediate Results (IRs) within the Economic Growth and Food Security SO will contribute to improved food security.

Past studies and experience indicate that redistribution of income in most low-income countries is not adequate to address poverty reduction and food security. Rather, the solution to poverty reduction and food security must come from economic growth. Only when economies experience relatively rapid growth over several years does one observe a decline in the percentage of the population living below the poverty line. Achieving this rapid economic growth is thus the primary mechanism for reducing poverty and improving household access to adequate food.

Food Security

By targeting agricultural subsectors, the enterprise development activities will contribute to increased production of food goods for domestic consumption, provide employment in commercial agricultural production and processing, and provide some export earnings that can be used to purchase food or equipment to further expand economic growth activities. The increased volume and efficiency that should result from subsector activities will lower market prices, making those food goods more accessible to consumers. In cases like poultry, fruits and vegetables, and dairy, household level nutrition will improve as well as household income. In these various manners, enterprise development will contribute to all three aspects of food security: availability, access, and utilization. Given the high risks involved in rainfed agriculture, diversification offered by higher-value irrigated crops and livestock is critical to improving rural household income and food security, and to maintaining the economic viability of commercial farms.

The microenterprise activities focus first and foremost on increasing household incomes and thus, access of the targeted vulnerable households to food. They will also help participants improve business skills so they can continue to find income earning opportunities in a changing economy. Many of these households are displaced persons, women headed households, or the families of persons living with HIV/AIDS (PLWHA). Over time, the microenterprise activities will empower participating women, improve the capacity of these vulnerable groups to manage investments, provide small loans of increasing size, and help households build the assets they

need to cope with future crises and expand their investment in small income generating activities. It is intended that these activities should be accompanied by services that provide information and training on improving food utilization in maternal and child nutrition and health, family planning and HIV/AIDS. With the help of these microenterprise activities, hopefully many of these vulnerable households will achieve a level of self-reliance that allows them to take advantage of the opportunities to enter the commercial economy offered through the enterprise development activities.

The public sector food security management cluster is focused on improving the policy environment for food security and economic growth in the agricultural sector. There are several activities that provide USAID/Eritrea with an opportunity to make a concrete contribution to economic growth and/or food security, and enter into a policy dialog with the Ministry of Agriculture (MoA) to improve the environment for related activities.

Gender

Female headed households are estimated to make up 35 to 46 percent of all households. Other statistics indicate that women own 43 percent of micro, small, and medium enterprises and provide more than 30 percent of the labor force in the formal sector. They are an important part of the Eritrean economy and rapid economic growth will not take place unless women's opportunities to expand their enterprises and increase income also increase substantially. It will be necessary to target women for loans, services, and income generating activities, since there are strong cultural forces that tend to result in women being neglected in these and other areas. The Eritrean legal framework offers women equal political, economic, social, and cultural rights including equal access to land and inheritance divorce and custody. However, many of these rights remain difficult to implement in practice, particularly at the village level. Women are more likely to reach their investment objectives, repay loans, and use the income to meet the basic household needs than men. Targeting women in enterprise development activities helps meet poverty alleviation and food security objectives as well as those of enterprise development per se.

Microenterprise activities target vulnerable populations and in many cases involve women who are displaced persons and from minority ethnic groups. Participants, predominantly women, are creating or expanding income generating enterprises, helping meet basic household needs, and accumulating assets to help withstand future crises. The experience and skills developed will help allow more of the vulnerable population to engage in mainstream subsector and enterprise development activities, providing additional opportunities to improve incomes and participation in growing subsectors of the economy. In the future, complementary NGO activities will provide information and training regarding health and nutrition, family planning, and HIV/AIDS.

HIV/AIDS

It is generally accepted that the HIV/AIDS incidence rate in Eritrea is low (3 to 4 percent). But there is fear that the demobilization of soldiers and the accompanying return of commercial sex workers to their homes and villages, may lead to a sudden jump in the rate of incidence. A significant increase in the incidence of HIV/AIDS could push Eritrea back into the difficult labor situation it experienced during military mobilization, which would severely constrain future

economic growth and food security. Successful enterprise and microenterprise development provides people with employment and income earning opportunities, thereby reducing the economic incentive to engage in risky behaviors and increase the wherewithal of households to meet the nutritional and medical needs of PLWHA. Enterprise and microenterprise development activities in agricultural subsectors will increase the availability of nutrient rich food products which serve the nutritional needs of PLWHA, then PLWHA will remain healthier and live longer, helping extend the period in which they remain productive members of their households. The microenterprise activities are intended to serve as a vehicle for providing health, nutrition and HIV/AIDS information and training to target populations. Collaboration with MoA home economy agents can perhaps extend the impact of this service.

Participation

One of the primary objectives of the enterprise development subsector interventions is to bring together stakeholders from throughout the subsector to identify problems and begin to work together to resolve them. The skills and attitudes developed in this process, particularly those related to democratic principles and financial transparency are the building blocks of increased participation in governance and translate easily to other civil society situations. Over time, the associations of people with like economic interests, their skills, and their advocacy would contribute to the breadth and depth of civil society in Eritrea. The savings and credit associations being formed under the microfinance activity offer similar opportunities at a grassroots level.

Key Cross-Cutting Issue Recommendations

1. Microenterprise activities should target vulnerable populations and be scaled up to reach more people. They should target increasing household assets as a means of withstanding future shocks in addition to immediate income and be accompanied by activities that provide health, nutrition, family planning, and HIV/AIDS information and training.
2. USAID should undertake efforts in the public sector to improve the environment for economic growth, food security, enterprise development, and micro-development activities. USAID should use these efforts as a basis to enter into negotiation with the MoA on policy issues, starting with those that affect the implementation of USAID programs.
3. Enterprise development activities should identify subsectors in which women are involved and help provide women with opportunities to expand their participation in the commercial economy. They should target post-harvest conditioning and processing of agricultural products, which would be a likely area for women's involvement. Given cultural constraints, female-headed households might benefit significantly from access to mechanized services, particularly for land preparation.
4. Subsector development interventions should strive to help integrate rural households into the commercial economy. Subsector development interventions should include efforts to address HIV/AIDS in the workplace.

SECTION I

Overview of the Report

A. Background

USAID/Eritrea is preparing a new Integrated Strategic Plan (ISP) for the 2003-2008 period. All three components of the Mission's portfolio: Health (IO1), Enterprise Development (IO2) and Human Capacity Development (IO3) are being revised in the process of preparing the new ISP. USAID/Eritrea contracted Chemonics International Inc. under the GBTI-IQC to undertake an assessment of the Enterprise Development (IO2) program. The purpose of this sector assessment is two-fold. The first is to conduct an evaluation of the Enterprise Development (IO2) program as originally designed and implemented, including continued support to the REU. The second is to identify and describe the opportunities for promoting economic growth in post-conflict Eritrea under an expanded SO by focusing on agriculture and rural activities, particularly the agribusiness subsector.

B. Methodology

Chemonics was able to obtain and distribute a few key documents to the Assessment Team and to have team members attend a brief organizational meeting in Washington prior to traveling to Eritrea. Upon arrival in Eritrea, the Assessment Team attended a briefing by the USAID Mission Director and the Enterprise Development IO team, and began reviewing a large volume of documents. It spent a week interviewing a wide range of government officials, CBER and REU staff, entrepreneurs having received loans from the ERCS or EIF funds, and others involved in enterprise development and the agricultural sector. The Assessment Team also spent a week traveling to Massawa, Karen, Barentu, Aqordat, and Tessenei to interview participants in the REIP activities and other key informants on enterprise development and economic opportunities in the agricultural sector. In the process it was able to assess interactions and collaboration between CBER and REU field offices. The Assessment Team spent most of the third week writing the report and meeting with USAID/Eritrea to discuss findings. The team leader was scheduled to spend a fourth week finalizing the draft report. This time was extended to allow the team leader to better address some additional issues, particularly those related to the management of food security by the public sector.

C. Approach

Simplified Results Framework

The approach in this report is based on a very basic results framework. It assumes that the SO will focus on economic growth, particularly of the rural sector, which would be supported by either two or three IRs:

1. An IR focused on Enterprise Development (SME); beginning with a continuation of core activities in the present IO 2 and transitioning to a broader program providing business development and agricultural business information services as well as credit.

2. An IR focused on Food Security, continuing some ongoing food security related activities and potentially expanding to include some additional targets of opportunity. It could serve as a vehicle to enter into negotiation with the MoA on a number of policy issues affecting food security, preferably targeting those that directly affect USAID supported activities; and

3. An IR focused on Microenterprise Development, particularly focused on vulnerable populations that might include women, people living with HIV/AIDS, displaced persons, minority populations, etc., and using a group lending methodology. This IR might be folded into either IR 1 or IR 2.

Critical Assumptions

This report assumes that although it will likely take longer than planned and encounter additional obstacles, the present peace will hold and the demobilization will take place. Mobilization is important not only in terms of returning critical personnel to institutions involved in USAID supported programs, but also to reduce the serious labor constraints faced by most rural and urban enterprises. For example, Eritrea has experience in the cotton and leather subsectors and would like to develop those subsectors as competitive clusters. However, the labor shortage and relatively high labor costs make it unlikely that Eritrea can be competitive in the manufacture of cotton apparel and leather goods, until more labor becomes available and cheaper. The Assessment team assumes that the demobilization will take place without violence, and that it does not result in a major rise in HIV/AIDS, which would lead to future labor shortages.

The report assumes that as the private sector and increased competition develops, there will be less reason for government or PFDJ involvement. The Assessment Team also assumes that the GOE will allow USAID to use TA as is necessary and appropriate to build capacity among participating banks, at the REU, within target subsectors, and for some of the food security activities as well, particularly capacity building within the Grain Board. Successful establishment of business and agricultural service activities are dependent upon being able to find private sector service providers and the REU being willing to work through them.

USAID is not able to make major infrastructure investments, such as irrigation works and road building, nor is it prepared to underwrite the cost of classic agricultural research and extension operations and institution building. These investments may be required to support food security and sustained economic growth in the agricultural sector in Eritrea, but they are expensive and long-term investments which are beyond the scope of the present USAID strategy. Other donors, including the World Bank, Italian Government, UNDP, and ABD are active in these areas.

Climatic conditions in Eritrea are semi-arid, and drought and the vagaries of rainfall are a constant threat. Water availability is the primary constraint to domestic food availability and a major cause of the structural food deficit. Given limited irrigation potential and poorly developed

dryland farming systems, this structural deficit in domestic food availability will continue for the foreseeable future. The emphasis on diversification of the rural economy and on higher-value agricultural subsectors in which entrepreneurs may be able to afford irrigation, or in which available irrigation resources are likely to be used, are intended to provide alternatives to the high-risk rainfed agricultural activities.

Macroeconomic stability, inflation and balance of payments are important concerns. Government spending has consumed 49 to 77 percent of GDP between 1998 and 2001, while fiscal revenues remain very low. Eritrea is heavily dependent on remittances from the diaspora and donor financial assistance, for balance of payments, foreign exchange and budget support. Nearly two-thirds of all exports went to Ethiopia before the hostilities, providing a protected market with few quality requirements and allowing the Eritrean export sector to avoid the need to be competitive. Given its lack of experience in competitive markets, the Eritrean export sector will require some time to learn how to be competitive. In the meantime, access to foreign exchange at a reasonable cost is a significant constraint for enterprises that need to import equipment and other inputs. Eritrea's location makes trade with Europe and the Mid-East promising, and it has access to sea transportation from the ports of Massawa and Asab. However, manufacturing and agricultural activities are concentrated inland. Land-based transportation systems for goods are not well developed and are expensive. Access to air cargo appears to be quite constrained and transport to Europe via Nairobi is very expensive.

D. Overview of the Report

Sections two through four of this report assess the Rural Enterprise Investment Partnership (REIP). Section II provides an overview of the original REIP concept proposed by ACDI/VOCA and implementation constraints that have prevented this vision from being implemented. Section III presents an assessment of the REIP financial components, including the Emergency Reconstruction Credit Scheme (ERCS), the Enterprise Development Fund (EIF), the Commercial Bank of Eritrea (CBER) as the institution managing the credit funds provided through the REIP program. Section IV offers an assessment of the Rural Enterprise Unit (REU) and the numerous functions that it has been asked to perform even though was not staffed by ACDI/VOCA personnel as originally planned. Section V provides an assessment of a number of agricultural subsectors that offer promising opportunities for economic growth, either in terms of export potential, or contributions to the domestic economy. Section VI presents an assessment of the CARE's savings and credit association approach to microenterprise, also funded under IO 2. Section VII gives a brief overview of efforts to improve food security in Eritrea as well as a number of the constraints encountered. It goes on to identify some targets of opportunity for USAID programming linked to public sector management of food security. It does not assume that the food security problem will be overcome anytime soon given the large structural deficit faced by an arid country like Eritrea. It also suggests that water resources are not likely to be sufficient to irrigate enough land to produce sufficient quantities of basic food crops and that USAID is not in a position to underwrite large-scale irrigation programs. Section VIII addresses cross-cutting issues between enterprise development and economic growth and social issues including food security, poverty, gender, and HIV/AIDS. Finally Section IX presents a summary of conclusions and recommendations from the preceding chapters.

SECTION II

Overview of the Rural Enterprise Investment Partnership (REIP)

A. Concept and Background

In September 1996, USAID/Eritrea signed a cooperative agreement with ACDI/VOCA for the Rural Enterprise Investment Partnership (REIP) program. A team was fielded in October 1996 to begin implementation. The central theme of the original proposal was to strengthen both sides of the "banker to borrower" relationship, facilitating the delivery of financial services to businesses and building the capacity of those businesses to be good bank customers. In the original design, ACDI/VOCA expected to staff the Rural Enterprise Unit (REU) and use it as the platform to link and coordinate the three components of the REIP, the bank component involving the Commercial Bank of Eritrea (CBER), the Enterprise Investment Fund (EIF) and the REU. The EIF provided a line of credit to promote SME lending by the CBER and provided dollar-denominated loans for those enterprises requiring imports and lacking access to foreign exchange. Technical assistance, computerization and some changes in procedures were expected to help the CBER become a more effective source of SME lending. In addition to coordinating the entire program, the REU was expected to provide technical assistance, undertake subsector studies and provide market information. Subsector studies were projected to determine the economic growth potential and investment feasibility in promising subsectors, provide market information, and develop marketing contacts. The REU was also intended to facilitate the testing and diffusion of selected promising technologies and design a strategy to develop cooperatives and producer associations. The REU was expected to find an Eritrean institutional partner that would provide the institutional home for business development services (BDS) training. This Eritrean institutional partner, with technical assistance from ACDI/VOCA, would design a BDS training program and conduct training-of-trainers workshops. These private and public sector trainers would provide BDS training to entrepreneurs, coops and producer associations in target areas.

The REU was intended to provide technical assistance as well as undertake subsector studies, provide market information and assist entrepreneurs in making marketing contacts. It also had responsibility for facilitating the establishment of a business development services (BDS) program that would train trainers to provide BDS services and training to entrepreneurs, coops and producer associations.

However, this vision was never implemented. The investment partnership agreement between USAID and the GOE, signed one year after ACDI/VOCA began program implementation, revised the approach and stipulated that the REU and the EIF would be placed under the direct supervision of the GOE. U.S. government regulations prevented disbursement of funds to a government involved in hostilities. The EIF and the ERCS were both established as special windows within the CBER, with ACDI/VOCA facilitating disbursement of funds to the CBER. The REU was established as an "autonomous affiliate" of the CBER, but under the supervision

of and responsible to the REIP Advisory Board. It functions as a public sector institution, but with no concrete legal status, either as a private sector or public sector entity. While no longer serving as ACDI/VOCA's REIP project management unit, the REU retains many of the management and coordination functions, including the preparation of the annual REIP work plan and budget, and monitoring of REIP program implementation.

Overall funding for the REIP Investment Partnership Agreement is expected to total $13,286,000. In August 2001, Amendment No. 5 extended the completion date to May 31, 2004 and added $2,439,000 to the $10,847,000 already obligated under the bilateral agreement for a total obligation of $13,286,000. However, slightly over one half of this amount, $6,735,000, was transferred to the activities implemented under the Crisis Modifier, including the ERCS loans, the CARE/Vision Eritrea microfinance program, the Africare/Vision Eritrea livestock replacement program, and a small contribution to an FAO/MoA fund to purchase seeds and tools. The $6,735,000 transferred to emergency activities, included $5,335,000 from EIF capital funds, $350,000 from EIF operating funds, and $1,050,000 from REU technical and direct assistance funds.

B. REIP Implementation Constraints

Any assessment of the REIP must recognize that the conditions under which the program was implemented have been anything but normal. The delay between signing the cooperative agreement with ACDI/VOCA and the investment partnership agreement with the GOE, and the eventual incompatibility between the two, disrupted implementation during the first year. Hostilities with Ethiopia broke out only 6 months after the bilateral agreement was signed, and stalled implementation for most of the next three years. ACDI's Senior Bank Advisor was evacuated for 14 months between May 1998 and July 1999 and again two more times for a total of more than 18 months. In April 2000, CBER and REU offices in Gash Barka and Debub were evacuated, and most of the offices were destroyed or damaged during the invasion in May 2000. The Tessenei, Mendefera, and Adi Keih were reopened in early 2001 and the Barentu office some time later.

During the hostilities, the CBER lost all of its newly trained loan officers as well as many other personnel to the military draft. The REU also lost a number of its employees. The expected demobilization has been delayed and at the time of this assessment in September 2002, most of the employees have not yet returned and many of the positions are still unfilled. In the interim, with most military age men and many women in the military, it has been nearly impossible to find qualified candidates to fill the positions. Additional rounds of the military draft and low base salaries in a period of acute labor shortages caused high turnover in what limited staffing was available.

The war and military mobilization also disrupted most sectors of the economy and business, making it difficult to find enterprises with viable business plans which might qualify for loans. Most areas of Gash Barka and Debub zobas were evacuated during the Ethiopian invasion in May 2000. Cities and farms in those zones were heavily damaged by the invaders. The SBA estimated that the CBER faced nearly 100 percent loss of its investments in those regions. After the fact, international organizations estimated losses of at least $600 million. Most business owners returned to find their buildings damaged and any equipment and inventories which they

were not able to move, looted or destroyed. Access to the resources, and particularly foreign exchange, to import new equipment and inventory has been in extremely short supply.

The military mobilization makes it very difficult for businesses to find the labor they need to operate effectively. On the positive side, this labor shortage has caused a greater integration of women into the economy. In addition to women, businesses are often dependent on youth who have not yet reached the age of military induction (18) for their labor needs.

Due largely to war related disruptions of business expansion and lending activity and lack of expertise, no financial services have been provided by the EIF in the form of equity investment and/or foreign exchange financing for imports. Dollar denominated loans faced a significant deterrent in the face of limited exports and market uncertainties, since without export sales, firms would have no dollars with which to pay back the loans. At the same time, war damage and economic slowdown in Gash Barka and other regions has created an acute need for direct financing to rehabilitate businesses and support economic expansion.

The results of the hostilities caused USAID to activate the Crisis Modifier built into its Country Development Strategy. This Crisis Modifier caused $5 million of the $9 million EIF funds to be placed in the Emergency Reconstruction Credit Scheme (ERCS). The Crisis Modifier also caused a significant portion of the funding for technical assistance to the REU to be transferred to other emergency reconstruction activities.

Under these circumstances, there was little chance that the REIP partnership could meet its original performance targets. In fact, the major success of the REIP to date has been the rapid disbursement of the $5 million in emergency recovery loans to viable enterprises capable of playing a role in economic recovery and repaying the credit. The Assessment Team will attempt highlight the lessons learned from this REIP experience and use these learnings as the basis for recommendations on enterprise development and an expanded economic growth and food security strategic objective.

SECTION III

REIP Financial Components

A. Emergency Reconstruction Credit Scheme (ERCS)

The ERCS was launched in August, 2000, through three CBER branches in Tessenei, Aqordat and Barentu. Loans were to be extended directly by the CBER to known clients (trade and services, industrial and agricultural) with verifiable losses as a result of the 1998-2000 war, with or without current loans from the bank. Subject to bank credit analysis, loans were to be extended up to the amount which would have been warranted by the client's pre-war level of business, with no loan maximum.

An amount of $5.0 million in USAID funding was allocated to be disbursed under ERCS over a l2 month period. According to program criteria developed by the SDA, the maximum loan term was to be 5 years, the interest rate 8 percent pa, the grace period was not to exceed 12 months and was to be justified by project cashflows. No collateral requirement was placed on these loans, leaving CBER free to set collateral as it deemed necessary.

Repayments to CBER were to become the property of CBER, e.g., it could directly place these re-flows back into its capital without re-lending. This was done so that the bank could begin to build up its capital after war related loan losses and eventually reach capital adequacy according to international banking standards. CBER was to be reimbursed for the principal amount of the loan extended, by ACDI/VOCA under the alternative disbursement procedures, upon USAID approval of the bank's monthly reimbursement requests.

A1. Lending Activity under the ERCS

Due to delays in the start-up of the regular EIF loan program, CBER lending under the REIP began in earnest under the ERCS. During a 23 month period (August 2000 through July 2002), CBER extended 386 ERCS loans, for a total of ERN 50,972,851 or $5,048,270. According to loan statistics (July, 2002), the bulk of the ERCS money has gone into lending to domestic trade and services businesses (70 percent), with about 27 percent extended in loans to agriculture, 2 percent to industry and 1 percent to mining. The amount extended to agriculture roughly corresponds to the 30 percent of the CBER's regular portfolio allocated to agriculture.

CBER loan summaries (7/20/02) as well as discussions with headquarters managers and branch managers in the REIP target area, indicate that ERCS funds were used to make a wide range of loan sizes, ranging from ERN 5000 ($500) to ERN 4.0 million or $400,000 (using an average exchange rate of ERN 10/$1). The majority of the loans fall in a range from ERN 100,000 ($10,000) to ERN 1.0 million ($100,000). Discussions held with CBER headquarters and banch managers indicate that this is the range in which the bank is most comfortable in making loans to rural enterprises.

Most of the money lent to agriculture has been used to replace productive assets (machinery, irrigation infrastructure, livestock) and for planting food and cash crops on farms of all sizes. Agricultural related projects have received loans as small as ERN 20,000 ($2000). The bulk of the money loaned for agriculture (70 percent) has gone to medium and large scale mixed farming operations receiving loans of from ERN 100,000 to ERN 4.0 million. Three large scale mixed farming operations received loans over $250,000 each. In only one case it appeared that loan proceeds had been utilized to replace assets and productive capacity not lost due to the 2000 invasion. In each case, the capital was being used to generate real value added in terms of agricultural production for sale in the domestic market. Among the products being produced on these farms are cotton, bananas, citrus fruits and vegetables for the local market, sorghum, dairy and other livestock.

Loans for trade and services businesses have generally been smaller (ERN 10,000 to ERN 400,000) and have been extended to retailers of food products, clothes, fuel, construction and agricultural materials, as well two wholesalers of (respectively) vegetables and skins and hides. Loans have also been accorded to a number of garages, small hotels and bar/restaurants and two small grain mills.

Summary loan statistics indicate that ERCS loans have gone disproportionately to male borrowers (70 percent) with about 30 percent being accorded to women. Field discussions at CBER offices indicate that loans to women have generally been extended for retail sales, restaurants and operation of small service enterprises (tailoring for example), while larger loans for agricultural enterprises and large bar/restaurants have been accorded to men.

A2. Loan Repayment on Overall Portfolio Basis

Examination of ERCS loan collection statistics through July 31, 2002, indicates that the bank has collected a cumulative total of ERN 12,537,702 or 25 percent of the ERN 50,972,851 extended. Discussions with the CBER Credit Administration indicate that the bulk of the outstanding loans with past dues as of 6/30/02 are 0-90 days overdue and these loans amount to ERN 29,123,616 or 69 percent of total outstanding loans (ERN 42,122,437). The practice of lumping loans 0-90 days past due into one category is standard for the Eritrean banking system. However, this classification tends to overstate the Portfolio at Risk (PAR) since many loans likely to be less than 30 days past due, and are thus not technically “at risk”. Less than 1 percent of loans are more than one year past due and 30 percent are between 90 days and one year past due. Bank staff seem confident that most of these loans will be collected. One of the reasons for the high percentage of loans past due is that repayment terms for many of the agricultural loans fail to reflect the cash flow of the enterprise. Many agricultural enterprises have seasonal income and sales possibilities may not be profitable until several months after harvest.

A3. Loan Repayment at Branch Level

Loan repayment under ERCS has been higher among the trade and services sector clients, who generate regular income from their businesses. There have been higher arrears in agriculture, due in some cases to poor packaging of loan terms vis-à-vis project cash flow and crop prices below projections. During 2001, CBER notes that agricultural loans were late or resulted in non-payments more than usual due to drought, which remain a problem in 2002.

At the Branch Offices visited (Barentu and Tessenei), the repayment performance for ERCS loans was mixed. In Barentu, about 43 percent of amounts due and payable for the July repayment period were in arrears. For Tessenei, the comparable figure was 17 percent. One might have expected a better repayment rate in Barentu, because a larger portion of the portfolio seemed to be in the trade and service sector. The biggest difference between the two branches seems to be the presence of two loan officers in Tessenei and none in Barentu, thus in Barentu the Branch Manager has to perform loan analysis and follow up, in addition to his other duties. There was no REU branch functioning in Barentu from August 2000 through May 2002, but that office serves both Barentu and Tessenei. However, it may be that more of Tessenei's portfolio is addressed directly by REU headquarters because of the number of large loans to large agricultural enterprises. There is an issue of a poor relationship and little communication between the REU office and the CBER branch managers in Gash Barka. In at least one case this resulted in a loan being processed and recommended by the REU, without consulting the CBER branch to learn that the client had defaulted on a previous loan.

A4. CBER Adherence to ERCS Terms and Policies

Assessment Team discussions with the CBER Headquarters Administration Unit, as well as branch managers at the Tessenei and Barentu, indicate that with a small number of exceptions, the bank has followed the credit procedures and criteria developed by the SBA for the ERCS program. Again with only a small number of exceptions, borrowers have been able to present verifiable damages from the 2000 invasion, and loans appear to have been made to replace pre-existing assets and productive capacity.

Loan terms have ranged from two to five years (the program maximum), at an interest rate of 8 percent per annum. Grace periods have been granted for from six to twelve months, based partially on cash flows. Collateral has generally been taken in the form of registered buildings or chattel mortgages on trucks or equipment (insured in the bank's name). Relatively little use has been made of personal guarantees in branch lending due in part to lack of experience with it. With the exception of Barentu, which was closed during the invasion and only recently reopened to assume a portfolio generated for it under the Aqordat Office, at least one loan officer has been installed in each branch handling ERCS lending.

Loans made under the ERCS program have been extended largely to existing customers of the bank. This was indicated in discussions with both CBER Credit Administration staff and branch managers in Gash Barka. The reason for this seems to be the "comfort factor", e.g., bank familiarity with these clients and their business history, requiring less project analysis and posing lower risks. Also, it should be noted that lending under the ERCS has, as originally anticipated in the program design, given a significant number of bank customers a chance to successfully resurrect their businesses so that they can pay off past loans. Branches in Tessenei and Barentu have in fact "frozen" arrears on several loans to war damaged businesses, issuing a new loan under ERCS with the agreement that the borrower would pay off arrears when the business was back to normal operation.

ERCS loans have been extended for the most part without requirement of a business plan or feasibility study. Lending under the EIF has been done on the basis of business plans and

feasibility studies for projects over ERN l00,000 and simple business plans for projects between ERN 20,000 and ERN 100,000. Only a simplified credit requisition form is required for loans less than ERN 20,000.

B. Enterprise Investment Fund (EIF)

Although the EIF was intended to provide foreign exchange for financing imports and to allow the extension of financing in exchange for an equity position in the enterprises financed, this did not happen. As manager of the fund, the CBER has no experience with and probably little interest in taking equity positions in the enterprises it finances. With regard to foreign exchange denominated loans, bank staff indicated that the bank would need repayment in foreign exchange in most enterprises are not exporting and therefore do not have the means to repay the loan in foreign exchange.

In part due to the pressures of doing emergency lending under the ERCS scheme, CBER did not began in earnest to make direct loans to enterprises under the REIP Enterprise Investment Fund Credit Scheme until November, 2001. A handful of loans that the CBER intended to finance under the EIF facility were apparently made earlier, but the transfer of the obligated resources to the ERCS program left no means to reimburse those early loans until new funds were obligated in March, 2001.

Using an initial obligation of $2,680,000, EIF has during the period of March 27, 2001 through July 31, 2002 (16 months) made 18 loans for a total of ERN 6,928,624 ($692,286), to enterprises in the agricultural, manufacturing and trade and services sectors. Ten of the 18 loans and the largest amount of this credit ERN 5,903,551 ($590,355) or 85 percent has gone into financing agricultural related enterprises, with 13 percent in the trade and services sector, and 2 percent in manufacturing (metal working). Trade sector enterprises receiving EIF loans included an electronic repair firm (ERN 32,000), a restaurant and bar (ERN 764,954), a retailer of vegetables (ERN 49,000) and several retail shops (ERN 18,000 to ERN 86,000). Agricultural related loans range from three small loans at ERN 27,000 to 29,000 ($2700 to $2900) for irrigated farming, to three large loans at ERN l,500,000 ($150,000) each, given respectively to a cattle fattening enterprise and two irrigated commercial mixed farming enterprises. As of 7/31/02, loans in the amount of $511,686 had been claimed for reimbursement under the REIP. Thus far, only 11 of the 18 loans have passed the grace period and are under repayment. All of the EIF loans thus far have been made to male borrowers.

Assessment Team interviews with the branches Keren, Barentu, and Tessenei indicate that there is a significant demand for EIF credit for irrigated mixed farming, and a real interest on the bank's part in making these loans. It was also evident in at least one case that business owner asked for an extension on repayment from June to December, because the original terms did not adequately consider the cash follow of the mixed cropping enterprise.

B1. CBER Adherence to EIF Policies and Procedures

Discussions with CBER Credit Administration and branch managers in Keren, Barentu and Tessenei indicate that the bank has followed the policies and procedures in making and servicing EIF loans. CBER has lent to enterprises in all sectors, including new and existing businesses. In

Keren, most of the loans have been to new customers while in other areas visited, loans are being considered or extended to a mix of old and new.

Projects are being finance for terms of from 2 to 5 years, and loans extended have fallen within the present program limits, which include a ERN 5000 minimum and a ERN 1,500,000 maximum. Grace periods have been designed to not exceed six months in non-agricultural businesses, and from six to l2 months for agricultural production enterprises.

Interest charged has been within the 8 to 12 percent range which is CBER's normal policy. There is little evidence of "pricing for risk" within this range. It was noted, however, in the Keren Branch Office visit that loans to customers under the EIF are generally being extended at 8 percent. Sound borrowers presenting projects backed by a good feasibility study can get a regular bank loan at 12 percent. It is only worth the aggravation and delays apparently incumbent on the present EIF system if there is some economic savings (eg., a lower interest rate) or if projects that the bank would not otherwise accept, qualify under EIF guidelines.

As with the ERCS lending, EIF loans are being made with collateral wherever possible, usually in the form of a registered building or insurance taken on a vehicle or other chattel. Several loans have been made "clean" to small scale agricultural enterprises where the borrower was known, but collateral was not available.

C. The Commercial Bank of Eritrea (CBER)

The Commercial Bank of Eritrea (CBER) is the country's largest commercial bank, providing a conventional range of commercial deposit and credit facilities. At the end of the second quarter of 2002, the bank's total risk assets were ERN 2,142,529,000 ($158,705,852). Some 80 percent of the bank's loans were held within the Asmara headquarters and three Asmara branches and 20 percent in branch accounts outside Asmara. The accounts held at headquarters and in Asmara branches are largely Asmara-based accounts, although the many large businesses in other regions have accounts in Asmara.

At CBER as in other Eritrean banks, very limited product development is being done. Rollover lines of working capital are non existent and lending is based primarily on term loans for investment, construction and overdrafts. CBER presently offers the following credit products for business, extended largely to known customers:

- Overdrafts used as working capital
- Term loans of two types: fixed asset financing and cyclical restocking
- Letters of Credit via the foreign department
- Letters of guarantee, local or international
- Advances against merchandise, at 60 or 70 percent of the export FOB

Deposit instruments offered include: current accounts (0 percent interest), savings accounts (5 percent) and time deposits (one year at 5.5 percent, two years at 6 percent)

CBER is presently highly liquid and recently started investing surplus liquidity in Treasury Bills paying 2.5 percent average (which is less than their deposit interest rate of 5 to 6 percent).

During the 2001 operating period, management indicates that about 30 percent of their loans were to agricultural related enterprises, and they expect that agriculture will represent about that proportion of their total portfolio this year. Although branch managers can “recommend” a loan up to a certain limit (ERN 100,000 or $7400), all loans are approved at headquarters. Loan approval is done through the Credit Committee. Loans are negotiated individually with borrowers on the basis of monthly, quarterly or annual repayment schedules, depending upon cash flow. Grace periods vary from six to 12 months, depending on the type of enterprise involved. Under REIP, 6 months has been the general policy but grace periods of up to l2 months have been given for agricultural production enterprises and some start ups.

Term loans are extended within a very conservative lending policy which is largely collateral based. Discussions with the CBER Credit Administration staff and branch managers in REIP target areas indicate that cash flow lending is not going on as a matter of policy, even though the SBA trained loan officers to use cash flow analysis and encouraged its adoption for use in the REIP activities. The Bank Manager indicated that it would be some time before cash flow lending could be commonly used. First, most businesses have no accounting records, no documented cash flow, and most entrepreneurs are not familiar with the cash flow concept. In many cases, cash flow projections in business plans will be gross estimates, and may not be very dependable, even if prepared by someone knowledgeable. Until the bank has loan officers with several years of experience doing such cash flow estimates, the bank will not be able to place much confidence in them, and therefore would prefer to continue using collateral as a back up. Second, while the original group of loan officers trained by the ACDI advisor has returned, they are still in national service and receiving only ERN 500 per month. The Bank Manager feels that under these circumstances they can not be employed as loan officers because the risk of their engaging in corrupt practices would be too high.

CBER operates 11 branches, including 3 in Asmara and 8 in other regions, in addition to the Liberty headquarters. Because of a low GOE dictated salary structure and the war related extensive and prolonged mobilization of men between the ages of 18 and 45, CBER remains severely understaffed, particularly at the credit officer level, both at headquarters and in the branches. These factors have made it difficult for banks to recruit and train credit officers. At present, the bank retail floor staff is made up largely of young men who are doing their national service, receive only an ERN 500 stipend rather than a real salary, and lack incentive or motivation with regard to their performance. The lack of staff has also made it very difficult to implement the bank’s loan supervision policy.

The manpower available at branch level is very limited. Although 20 trained staff returning from the war are in place and functioning (18 in branches and 2 at headquarters), in most branches the Branch Manager and a single loan officer have to analyze loan packages and supervise credits, in addition to working with back office functions and other banking responsibilities. According to headquarters management, the client to loan officer ratio in branches is 300 (average), and in some cases a loan officer may be managing 300 to 500 accounts, including overdrafts, term loans and advances.

Although the hiring and training of women credit officers was a key sub objective of the REIP project, CBER management indicates that this part of the program has not been implemented,

citing the fact that the SBA training did not include women officers and "cultural factors" make it difficult for women to move from area to area. At the same time, women recruits could be trained in a central location like Asmara, and re-posted to their home zobas where they know the local people and could work effectively with clients in their own cultural and language context.

At present, the CBER does not have the staff it needs to increase the number of loan officers and improve loan services. Part of the reason for involving the REU was the CBER's poor staffing situation. It is unclear whether the salaries presently being paid will be sufficient to attract adequate numbers and quality of staff after demobilization. During the present mobilization, the salaries it pays have not been sufficient to attract quality personnel.

C1. Computerization

As noted above, CBER Branches report loan status and classification statistics to the CBER Credit Administration Unit on a quarterly basis. Outside of Liberty Avenue Headquarters, which is computerized, the branches don't have the capacity to generate these numbers on computers. There are no working computers in branches outside of Asmara. Instead, daily calculation of loan interest, monthly calculation of loan payment information and quarterly reports on loan classification are done through manual compilation of account cards. Lack of computerization, coupled with limited staff to extend and supervise credits and dependence upon manual processing of loan statistics, makes it difficult for CBER to monitor portfolio, track potential problem accounts and apply specific "pro active" policies to improve credit recovery.

A standardized banking MIS is in the process of being installed by Kiddle to serve three of the four government owned banks, including CBER. However progress on installing the system is way behind schedule and it is not clear when the system will be functional.

C2. Credit Analysis and Lending Capacity

Under the ERCS, as much as 80 percent of the lending done was to established bank customers. When asked why, the Credit Administration Manager's responded that these borrowers had a "history" with the bank, their businesses and characters were known and the loan packages required less analysis and processing. In the midst of extreme pressure to make emergency loans under uncertain and therefore higher risk situations, the bank fell back on the "comfort" factor and taking of collateral wherever possible. However, the CBER lent out the entire $5 million available under ERCS relatively quickly in a manner that minimized risk and maximized comfort. There was no need to adopt more liberal criteria that entail more risk and less comfort, to distribute the funds. Since repayments will contribute directly to CBER capital reserves, it certainly was in the bank's interest to achieve maximum repayment.

In discussion on why the bulk of the ERCS approved agricultural credit ($ amount) was made available to sizable concessional farms in Gash Barka, the Credit Administration Manager gave three responses, which reveal the importance of the "comfort factor" and collateral.

- The farms had significant assets and could demonstrate war induced destruction more easily than a small rainfed farm;

- They were existing customers of the bank and had taken previous facilities (overdraft, term loans);
- They had collateral which the bank knew if could attach if enterprises had trouble repaying.

In response to an Assessment Team question as to whether CBER is "pricing for risk" within the bank determined interest range (8 to 12 percent), management cited the following factors which they "consider" in setting interest rates:

- Collateral;
- Financial condition of the business (assets, financial soundness);
- Past relationship with business; and
- Requirement of a business plan and three years financials (before and projected) for "larger" loans, defined as loans with a "capital" component.

Team discussions held with branch offices did not reveal specific evidence of pricing for risk in the extension of ERCS or EIF loans. Discussions held with headquarters and branch level credit staff indicated that during ERCS lending, CBER has relied heavily upon analysis of loan packages prepared by the REU, doing some analysis but largely verifying figures and key factors in business plans. Headquarters then consults with the branch office for their recommendations on the project, borrower and loan.

In response to questioning as to areas where management feels that CBER staff need more training to improve loan processing and quality, Credit Administration management cited project analysis, and specifically agricultural credit analysis. CBER would like to develop one Loan Officer in each branch who is capable of doing sound agricultural project analysis and lending, in addition to working with other loan products. The biggest project related constraint which bank management cited in working with REIP borrowers in agricultural production was lack of applicant knowledge of how to identify and exploit markets, adding that "Farmers cannot be both producers and marketers".

Lack of capacity to do credit and project analysis was also revealed in the Assessment Team's discussions with the World Bank funded Credit Advisor to CBER. Based on about one year's work with the credit staff, it is his opinion that the present management and credit staff do not have the capacity to do full loan analysis (financial and business plan), but instead rely largely upon Business Plans and balance sheets submitted to them by clients (and where they are involved, the REU). In his view, bank staff are "not ready" for the project analysis model which the World Bank team anticipates introducing here, adding that credit staff have been introduced to but "have not yet mastered" the simple balance sheet format used to run basic ratios on a business. He added that submitted loan packages and the reputation of the borrower are the basis for analysis of most CBER loans. He cited needs for further technical help in the credit operations in credit review, loan monitoring and business credit appraisal.

It is evident from all discussions of CBER lending activity that the bank has been heavily dependent upon collateral based lending to reduce repayment risk, in both their normal and REIP

lending. Headquarters management indicates that the bank does collateral based lending as general policy and that it uses security agreements to attach the following types of assets:

- Buildings, where title is registered and the bank retains title documents;
- Vehicles, which are registered and generally insured in both the borrower and bank name; and
- Other equipment may be used as security if the bank gets an agreement from the borrower not to remove or otherwise use it and it is insured in the bank's name.

At branch offices visited, collateral used is typically real estate (a house for example) for a first loan, or in some cases trucks or cars insured in the bank's name. Branch staff at the REU office in Keren and the Branch Manager at the Barentu CBER office, indicated that bank collateral requirements for loan security are "too stringent" for small borrowers, e.g., requirements which they simply cannot meet. They noted that lack of collateral has prevented some borrowers from accessing loans under ERCS. While most ERCS loans made under the Barentu Branch were non-collateralized, they did require collateral on some. Likewise, the Tessenei CBER Branch took collateral to the extent that they could on ERCS loans above ERN 5000. CBER Keren has been using collateral on larger loans and personal guarantees on some of the smaller EIF loans (ERN 5000 to ERN l00,000), where collateral is not available. All of the loan packages awaiting EIF processing at the Keren REU had collateral.

Personal guarantees, used mainly in Asmara, can be used for loans up to ERN 100,000, requiring a third party to sign for the borrower and assume repayment obligations if he does not pay. A guarantee must be backed with saleable assets on the part of the guarantor. Branch offices appear to have little experience with and to rarely use personal guarantees.

C3. Problems at Branch Level under REIP Lending

Excessively stringent collateral requirements were one of the problems cited by managers of the CBER branch offices visited by the Assessment Team in Gash Barka and Anseba. When asked to describe "what is not working", managers also cited the following

- The unwillingness of CBER to allow branch managers to approve smaller loans of under ERN 100,000 ($10,000) at the local level. While this was the proposed policy under the REIP program, all loans still require approval at CBER headquarters, regardless of size.

- The time-taking process of project screening and "appraisal" by REU (local and headquarters), followed by analysis of recommended loan packages by CBER headquarters and feedback from the branch. Both REU managers and CBER branch managers noted significant delays (from 3 to 5 months in some cases) in ERCS processing, exposing applicants to rising costs in basic inputs.

- Lack of communication and coordination between the CBER branch office and the REU. This is a problem in Barentu, where there does not seem to be much communication and cooperation between offices, particularly at the level of securing "client information" from the bank before processing a loan.

- Confusion of non-banking and banking roles in the course of processing REIP projects through the REU and the bank. This is especially noticeable at the levels of project analysis (referred to as "loan packaging" under the REIP) and credit supervision after a loan is accorded.

- Under the REIP program guidelines, these roles normally carried out by the lending bank were assigned to REU. While REU and CBER cooperation at these crucial stages has been remarkably good in Keren, there is some evidence that confusion of these roles, lack of manpower and poor communication at some points in the processing has compromised loan quality in other locations.

- Lack of sufficient manpower to carry out the roles and responsibilities assigned to cooperating agencies under the REIP lending programs. Managers of each of the CBER branches visited cited lack of staff as a key constraint to doing a better job of processing the volume of loan requests received (under ERCS and EIF) and providing after loan follow up.

REU staff in the Keren and Barentu offices cited additional areas where the REIP lending program is not working as well as it could be. These included:

- Licensing requirement for small enterprises (loans of less than ERN 100,000) which is part of the REIP procedures, but is not appropriate for all businesses. This is limiting access to the EIF facilities for clients being assisted by the REU in Keren.

- Inability to work with the requirements of very small projects submitted by women, notably projects requiring ERN 5000 or less. While a significant number of inquiries have come from women with small projects in Barentu and Keren, the "comfort level" and capacity to process them are not within the REU/CBER processing system.

- Lack of participation on the part of branch level officers of REU and CBER in meetings with top management in Asmara, at the level of decision making on project processing and "process".

- Lack of an overall plan or guideline from REU on the basis of which units can do their work planning.

Some of these constraints could be addressed in the present project, or in design of a follow on project. In any case, more realistic roles need to be worked out for partner institutions in project development and financing. Policies and procedures need to be more conducive to securing adequate staffing.

C4. Cooperation between Bank and REU

"Processing" is probably a good term for the "loan packaging" which is going on at the REU units visited by the Assessment Team in Gash Barka and Anseba. While some analysis seems to

be done by the REU project officer and branch manager at Keren, discussions with those staffs indicate that the following is essentially what is going on when a project enters the REIP process:

- The potential borrower is referred to the REU by the CBER office after making a loan inquiry under the REIP, or goes directly to the REU.

- The REU project officer reviews the applicant's documents and assists him/her with program criteria and completion of the REIP loan application appropriate to the size of project.

- In cases where the project will require a loan of ERN 100,000 or more, the REU officer informs the applicant that a business plan and feasibility study are required, and generally refers the project to the REU headquarters in Asmara for further "analysis" and referral to private resources which can assist in preparing the feasibility study.

- The REU headquarters "finalizes" the loan package with any required feasibility study and forwards it on to the CBER Credit Administration.

- It is generally "analyzed" by the CBER Credit Administration at the level of verifying the financials and other information submitted with the business plan.

- The CBER branch office manager is contacted to secure their review and recommendations on the loan package. He can "recommend" approval for loans up to ERN 100,000 ($l0,000).

- Before a loan decision is made, a suitable approach to loan securitization is agreed with the branch office.

- The loan is approved by the CBER headquarters-based Loan Committee.

- After the loan is granted, CBER branch office staff do the loan supervision.

- Reimbursement of the CBER loan from EIF funding is approved by the REIP Board of Advisors. If there is a question that certain categories of loans, such as those containing pesticides, will be approved, the CBER stops approving those loans.

The process of "packaging" rural investment projects and financing them through the present institutional relationships under REIP introduces some fundamental "disconnects". These are compromising both project and credit quality, causing unnecessary delays in project processing and delaying the day when both financial services and business advisory services can be offered to clients on a "market driven" basis.

The present REIP program is structured in such a way as to confuse the roles of the REU and the bank, assigning inappropriate project analysis responsibilities to the non banking entity (REU), and delaying the day when the bank will acquire and use the skills required to do sound agricultural project and credit analysis and adopt cash flow lending. This division of roles,

combined with severe shortage of CBER credit staff and the "take out" which the REIP loan reimbursement mechanism has provided for CBER as lender of record, has greatly reduced the bank's credit risk and has undoubtedly had some impact upon credit quality and loan recovery under the ERCS.

D. REIP Findings and Conclusions

1. The CBER has provided emergency and EIF lending under extremely difficult conditions related to the recent hostilities with Ethiopia, including: the loss of trained credit staff and interruption of capacity building programs, the forced closure and destruction of some of its offices in the Gash Barka and Debub regions, and the loss of substantial loan assets in those same regions due to war damage to businesses.
2. Under pressure to respond to the national crisis the CBER made 386 loans totaling over $5.0 million under the ERCS program and staff indicate there is a reasonable chance that most loans will be repaid. CBER lending activities under the ERCS and EIF have supported viable agricultural production enterprises which are adding value and supplying the domestic market with cereals, vegetables, fruits and livestock and dairy products.
3. The CBER is interesting in lending in the agricultural sector and helping existing clients return to viability so that they have the means to repay pre-war loans. However, there is little evidence as yet that CBER central bank management is as a matter of policy exploring new market opportunities to lend into the rural sector. This suggests that more than one bank should participate in future rural enterprise lending programs.

    - The CBER is most comfortable providing direct financing to agricultural activities in the range of ERN 30,000 to ERN 800,000 and does not regard itself as a provider of long-term investment financing. The Eritrean Development and Investment Bank (EDIB) is most comfortable lending in the ERN 200,000 to ERN 2,000,000 range to agricultural enterprises.

4. Lessons learned from the use of line of credit facilities indicate that the resulting loans tend to be made with less rigor than when banks are at risk for the loans. Both the CBER and the EDIB might profitably benefit from loan guarantee facilities. A 50 percent loan guarantee program would likely induce the CBER and other banks to take some exposure on loans to private rural enterprise. It would also encourage them to sharpen the skills of credit staff in project analysis and cash flow analysis as part of credit appraisal. Finally it would encourage the boards of this and other participating banks to adopt the policy of doing cash flow lending. One mechanism for providing such a guarantee would be the USAID supported Development Credit Authority (DCA), but the DCA only works with private banks, and none presently exist in Eritrea. An alternative and more flexible mechanism would be for USAID /Eritrea to directly provide guarantee funds covering 50 percent of the risk on loans.
5. CBER credit staff don't do and may not yet be capable of doing full credit and project analysis on agricultural and industrial projects. Lending remains based on collateral, familiarity with the customer, his/her asset base and prior credit history ("the comfort factor"). Lack of a fully computerized system constrains the bank's capacity to track and manage loans for higher rates of loan recovery.

6. The CBER is not using its considerable liquidity to diversify savings and credit products to meet the needs of the emerging private sector in Eritrea. Constrained by the national crisis and its impact on the bank, the structuring of the ERCS and EIF loan programs have not succeeded in providing the CBER with sufficient skills and incentives to diversify products and attract new clients. To help create more profitable, market oriented banks, USAID may have to consider raising the issue of having the government permit banks to charge positive, inflation adjusted interest rates on project loans.
7. Future USAID supported enterprise development activities should make a clear separation between the provision of business development services and banking functions, of which the latter should be carried out under the discipline of a formal commercial bank.

E. REIP Recommendations

Future rural enterprise financing programs supported by USAID/Eritrea should be structured in such a way as to (a) promote competition between two or more lending institutions, (b) induce participating banks to assume more of the lending risk and (c) support development of Agricultural Credit Windows within each participating institution. This needs to be done to improve banking capacity to do cash flow based lending, price for risk, increase the quality of loans and improve responsiveness to the financial needs of enterprises in sub sectors where the growth opportunities lie (domestic and export). Capacity building support to participating lenders should also be structured in such a way as to improve access to financing and business project technical support for Eritrean women entrepreneurs, in targeted subsectors where they can excel.

1. Access to financing resources should be opened to two or more banks on a competitive basis that can work with the risk profile and processing requirements of different segments of the market.
2. Induce participating banks to assume more risk by providing direct capital for participating banks to use in making loans in the form of a guarantee facility which would cover 50 percent of the bank's risk in the case of default, subject to specific criteria for eligible loans.
3. Consider providing a separate line of US$ financing to cover the foreign exchange needs of businesses importing equipment and other inputs.
4. Support the development of a well-staffed Agricultural Credit Unit within each participating bank.
5. Clearly separate banking functions (credit analysis and supervision) and business development services. Rearrange roles and responsibilities such that these functions are performed by the banks rather than by the REU.
6. Some indicators to use in selecting banks for participation in a credit guarantee facility include the bank's willingness to adopt the following policies:

    - Charging of market linked real interest rates;
    - Regular aging of portfolio at risk (PAR), at least quarterly;
    - Adoption of proactive delinquency management policies and practices; and

- An institutional policy focused on increasing recovery rates in program related lending.
- Access to a standardized banking MIS, like the one being installed by Kindle for use by three of the four government owned banks including the CBER, to improve loan tracking and credit supervision.

SECTION IV

Rural Enterprise Unit (REU)

The ACDI/VOCA proposal indicates that it intended to staff the REU as the project management unit and center for coordinating the three components of the REIP, the REU, the CBER, and the EIF. The proposal also indicates that ACDI/VOCA expected to find an Eritrean institutional partner which would serve as the institutional home for a business development services (BDS) program. This institutional partner would, with the help of ACDI/VOCA, develop a BDS training program, conduct TOT workshops, and provide support to Eritrean trainers presenting BDS training to entrepreneurs, women's groups, coops and producer associations in target areas. From the proposal it appears that ACDI/VOCA intended that the REU would serve as a business center for both agricultural and non-agricultural businesses. This business center would identify promising commodities, products and subsectors; undertake subsector studies to determine their economic growth potential and investment feasibility; provide market information; facilitate marketing contacts and the testing and diffusion of selected promising technologies; and design a strategy to develop cooperatives and producer associations.

About a year after ACDI/VOCA began implementing the proposed project, USAID and the GOE formalized a bilateral agreement with regard to the REIP that removed the REU and EIF from the direct control and supervision of ACDI/VOCA. This left ACDI/VOCA with no project management and coordination unit within Eritrea, and in effect ended the likelihood that REIP would function as a single integrated project. U.S. government regulations prevented disbursement of funds to a government involved in hostilities. The EIF, and the ERCS were thus each established as a special window within the CBER, to be disbursed by the CBER. Administratively, the funds are disbursed by USAID to ACDI/VOCA and then to the CBER as reimbursement for loans approved by the CBER and the Advisory Board. There does seem to be some confusion about who manages the EIF funds and how they are accessed. The team has heard reports that some clients and even some government officials believe that since the REU processes the EIF loan packages that they are also responsible for the funds and loan approvals.

The REU has been asked to serve at least four different sets of REIP program functions:

- *Banking functions*. Preparing loan packages and application for small (ERN 5,000-ERN 20,000) and medium (ERN 20,000-ERN 100,000) EIF loans from the CBER, facilitating feasibility studies and preparation of larger loan packages, credit supervision, and project screening.

- *Business development services (BDS) functions*. Facilitating delivery of BDS services, training consultants, training clients, provide training materials.

- *Agricultural Business Center (ABC) functions*. Identify subsectors and projects for support, undertake subsector studies of potential and costs (which can provide the basis for enterprise feasibility studies), provide marketing and marketing information services,

facilitate relationships between producers and buyers, exporters and foreign importers, researchers and producers, financers and entrepreneurs.

- *Project Management Unit functions.* The REU has retained many of the functions of a project management unit, particularly the role of preparing the annual REIP work plan and budget and monitoring REIP program implementation.

REU performance has been far below expectations due to a combination of factors. Certainly the lack of personnel and the high turnover related to the hostilities with Ethiopia have seriously constrained REU performance. However, it is difficult to have confidence that the REU could have accomplished these tasks even in the absence of hostilities as presently constituted, or if all of these tasks are appropriate to the REU. Given Eritrea's human resource constraints and low public sector salaries, most REU staff hired are newcomers with little knowledge and no experience in the tasks which they should perform. Staff turnover is high and most of the staff have limited capacity for training new arrivals. If the REU had been established as a private sector entity with ACDI/VOCA support, it would have had a better chance of having well-paid, permanent, well-trained and properly oriented staff. This in turn would likely have allowed the REU to perform much better than it has performed as a public sector entity under these conditions of difficult human resource access. More extensive use of expatriate consultants could also have made an important contribution to its performance. The GOE should target REU staff for early demobilization to help the REU get back on track in implementing the tasks assigned to it.

A. Banking Functions

It may have seemed necessary to have someone to help the CBER with loan processing, particularly someone with a technical agricultural background to help develop and process agricultural loans. However, REU staff do not have technical agricultural backgrounds, what little staff it has comes largely from commercial and business training programs, and the REU has also been unable to retain staff during the hostilities with Ethiopia. But perhaps in part because the REU has been processing loans for it, the CBER still has not established the capacity to effectively analyze and prepare agricultural loans internally. There is a real question of where the functions that the bank should be providing stop, and where those of a BDS service start.

The CBER has been unwilling to accept the loan analysis provided by the REU in any significant manner. It still requires its own Credit Administration staff and regional office staff to assess the loan. The existing process involving both the REU and the CBER now results in delays of as much as 2-5 months: 1) An understaffed REU regional office processes the loan and provides a recommendation; 2) an understaffed REU headquarters staff processes the loan and makes a recommendation; 3) an understaffed CBER regional office is consulted for information about the borrower and their recommendation; 4) the CBER Credit Administration Office processes and approves the loan; and 5) USAID approves reimbursement of the loan to the CBER. The importance of this last step is demonstrated by the fact that the CBER has declined to process a number of loans that include money for pesticides since USAID declined to reimburse the CBER for a large loan that included money for pesticides.

There is also an important question as to what is accomplished by having the REU process the loans. According the CBER General Manager, the REU preparation of loans up to ERN 100,000 meets the letter of the CBER criteria for granting the loan, but many of the entrepreneurs do not understand the business plan nor will they necessarily follow it once they get the loan. In processing the loans, the REU is not necessarily training entrepreneurs to develop better and more bankable businesses; but rather doing the paperwork necessary to get the loan funds released to entrepreneurs whose business management skills may be questionable.

One of the greatest constraints to small and medium enterprises gaining access to bank loans is the continued insistence on borrowers or a guarantor having sufficient collateral to cover the entire loan. While some exceptions to this rule have been made, especially under the ERCS program, the CBER still is not comfortable with using balance sheets, cash flow statements and other alternative bases for repayment analysis and lending. The REU has been a very strong proponent of cash flow based lending, both to help smaller enterprises to gain access to credit and improve the structuring of terms for the repayment of agricultural loans. This insistence, and its implied criticism of the CBER, apparently continues to be one of the sources of tension between the two institutions.

However, the CBER General Manager insists that one can not place too much confidence in cash flow based lending. Most small and medium enterprises have no financial records on which to base cash flow. While it may be fairly easy to estimate quantities of product sold and prices in some businesses, there is little to verify those estimates or prevent someone from exaggerating the estimates in order to make the business plan look good and secure a loan. In the absence of financial records, it will be difficult for the banks to have much confidence in business plans based on cash flow until the banks have trained loan officers with several years of experience analyzing enterprises in specific subsectors. Until then, the banks will continue to be much more comfortable with loans requests that are supported by assets and collateral.

B. Business Development Services (BDS) Functions

Their proposal indicates that ACDI/VOCA intended to find an Eritrean institutional partner to provide such services and focus the REU activities on the agricultural business center functions discussed below. However, no institutional partnership was developed and the Assessment Team has not learned of any Eritrean institution with the capacity and experience in providing business development services. At this point, none of the REU staff have technical agricultural training and all of the professional staff have background in business or economics.

The REU has focused on preparing and analyzing the feasibility of loans internally, rather than facilitate the establishment of capacity to perform the function by the entrepreneurs or by private sector consultants. It is certainly appropriate for a BDS agency to help train, or better yet, facilitate training of entrepreneurs in preparing business plans and enterprise feasibility studies. However, it seems less than efficient for the REU to prepare every small and medium EIF loan internally (in many cases, in place of the entrepreneur) and provide the entrepreneur a little one-on-one training in the process. One gets the impression that the loan processing is not efficient and that neither the entrepreneurs nor other private sector service providers have mastered the skills necessary to prepare such loans in the future. There is perhaps still too much of a public sector attitude that the REU will prepare loans for entrepreneurs, rather than training either

entrepreneurs (many of whom have limited literacy and numeracy skills) or private sector service providers to fulfill this function.

Over the last year, the REU has facilitated the adaptation of the ILO training modules on Improving Your Business (IYB) and Business Project Development (starting or expanding your business) for use in Tigrinya and Eritrea. The REU has developed a two tier training program, which will result in TOT courses being held in Asmara and direct training to entrepreneurs in Barentu, Keren and Massawa. The trainers would apparently be largely public sector personnel, some cooperative or producer association representatives, and an occasional private sector group or individual. The plan is still to provide such training at no cost to participants. REU documentation recognizes that this type of supply-driven service provision is not likely to be very effective and is likely to have a relatively high cost, but apparently does not feel that it has the flexibility to try a more demand-driven approach. REU reports indicate that it recognizes that similar programs have had more success when using the principle of cost-sharing and treating participants as clients rather than beneficiaries. However, the fact remains that the REU does not do these things even though it recognizes that this approach has generally been more successful. It appears that the REU has not succeeded in convincing authorities that cost-sharing is appropriate.

The "Giordano Dell'Amore" Foundation with financing from the Municipality of Milan developed a hands-on participatory BDS training program for people starting new businesses or expanding existing business in collaboration with the Municipality of Asmara. The first course for new start-ups was held two nights a week and Saturdays for a total of 100 hours over 8 weeks. Participants were introduced to basic book keeping and learned to: do a basic market survey, identify a product or service, customer needs, competition, estimate costs, pricing, potential profits and capital requirements, identify market size and location, prepare simple profit and loss statements and cash flow plan. They were introduced to licensing/taxation procedures and business regulations, and bank loan requirements. TOT was provided by an international training expert and an international business specialist. Trainers included two University of Asmara lecturers and an experienced business consultant. Only this first class has been held to date. A second class is intended to serve experienced entrepreneurs and a third to perfect business plans to the point of formal public presentation.

This is the type of BDS activity that the Assessment Team believes the REU should be offering (and perhaps will through the ILO modules), rather than preparing loan packages for entrepreneurs who often don't understand them. The target audience should be expanded to include consultants who will offer BDS services to entrepreneurs. This program was offered for free, but the REU should consider targeting a 15 to 20 percent cost sharing on the part of the clients. Clients should be offered a money-back guarantee that they will achieve the skills necessary to prepare a basic business plan. Unfortunately, basic literacy and numeracy is a pre-requisite.

C. Agricultural Business Center (ABC) Functions

Much of the REU program in the original ACDI/VOCA proposal was focused on conducting subsector studies, developing marketing strategies for individual commodities or subsectors, organizing visits to assess potential markets and make market contacts or invite potential importers to visit potential suppliers in Eritrea, and facilitating the development of technologies important to improving productivity in specific subsectors. These are the types of functions referred to herein as Agricultural Business Center (ABC) functions. These fall under what the REU refers to as technical assistance, direct assistance and techno-direct assistance projects. The REU has chosen to concentrate its efforts on the poultry and horticulture subsectors.

The poultry subsector activity will provide workshops to help existing and potential poultry entrepreneurs develop poultry farm management practices and skills. It will also entertain the

possibility of providing direct assistance to facilitate provision of services and products along the supply chain that may contribute to the improved functioning and efficiency of the subsector. The concentration on the improved functioning and efficiency of the entire supply chain appears appropriate, but most of the activities seem to be production focused. It would seem to be equally important to increase demand for poultry and poultry sector products and improve marketing strategies for participants throughout the subsector. One crucial aspect of a subsector approach is to bring participants from throughout the subsector (input suppliers, backyard producers, commercial producers, retailers, wholesalers, etc.) together to determine how they can help meet each other's needs. This would be an important step in identifying a market-demand approach rather than continuing to focus only on the supply side.

Much of the present poultry supply comes from backyard poultry production activities dominated by women. Many women's and poverty alleviation programs have supported these activities. There is a need to integrate these backyard poultry producers into the subsector strategy and help them organize producers associations that can be effective participants and stakeholders in the subsector.

The horticulture activity appears to be similarly focused on the production aspects of fruit and vegetables subsectors. Again it would seem to be equally important to focus on demand for vegetables and fruit. There is demand in the towns and Asmara urban area. Asmara also has an expanded expatriate community that demands high quality produce, which provides a domestic market for high-value niche products. Such high value niche products may also find a market in the Saudi market, if Eritrea can compete in quality and price with produce from Europe and the US. Saudi Arabia has become a significant producer and exporter of some fruits and vegetables. Top quality produce frequently sells for less in Jeddah than the price of ungraded produce in Asmara. Competition from other countries in the region is stiff. Eritrean fruit and vegetable producers can use the experience of supplying local high-value niche markets to prepare for competition in the Saudi and European markets. Producers must also be cognizant of the standards of these markets, not only in terms of quality and pesticide residues, but also in terms of the social responsibility and environmental standards that many retailers and brand name suppliers require.

It would also seem appropriate to do subsector studies of the poultry and horticultural sectors, if those are the sectors where activities will be focused. A good subsector study would help identify constraints in the subsector, elements of a potential strategy to improve the effective and cost-efficient production and flow of products throughout the entire supply chain, and identify appropriate markets for the subsector's products. It would provide a focus for discussion among stakeholders in the subsector. The subsector study would also provide most of the information needed for the business plans and feasibility studies of individual enterprises. In Eritrea under present conditions, it is probably impractical to expect that many individual enterprises can conduct a detailed marketing study. The CBER and REU have continually complained about the lack of marketing information and strategy in the feasibility studies of loan candidates. Subsector studies provide a means for the REU to provide subsector specific marketing information as a public good and help improve enterprise loan packaging in a manner that is much more cost-efficient than trying to do it for an individual enterprise. These subsector studies would also provide a baseline that would allow the REU with relatively little effort to maintain database on

prices of target products in relevant markets, for example, by updating domestic market prices with limited surveys and international markets via the internet.

Attempts to date to implement subsector studies and enterprise feasibility studies with Eritrean consultants have had limited success. Eritrean consultants typically have little knowledge of or experience with the marketing side of the subsector, and particularly with international markets. Recent efforts to implement studies in the Fisheries and Construction subsectors have not been very successful and demonstrated a lack of understanding of the private sector business services industry. While the REU requested that consulting firms/consultants participate in the process, it requested that they participate on a full-time basis for four weeks without salary, suggesting that the exercise was a form of training for private consultants. The study team included personnel of the REU and other appropriate government agencies (who of course retained their normal salaries). Several consulting groups sent junior staff for the educational experience, but no senior consultants, who typically had revenue generating opportunities during the exercise, participated. While senior consultants reportedly would be willing to attend a short workshop to learn the REU requirements and how to use REU guidelines for the conduct of such a subsector study, most cannot afford to go a month without salary income nor do they see any reason to do so.

The exercise had an additional negative demonstration effect: if the REU intends to treat the private sector as unpaid labor as was the case in this exercise, then there is little reason for private sector consultants to have any interest in participating in REU studies and other activities.

The fisheries subsector study is more of a production project proposal than a subsector study. It does not address stakeholders throughout the subsector, but only the needs of a fishing cooperative. It accepts that most marketing will be done by “distribution companies” such as ERIFISH and EMPC/LEDA, but does not include them in targeted activities. Neither does the study attempt to identify what these distribution companies might need to improve their outlets and increase the sale and average price of seafood products provided by the artisanal fishers. The approach sets up the distribution companies as a constraint to be overcome, rather than as stakeholders and participants in the subsector that might possibly have a lot to contribute to the improvement of the subsector. One of the strengths normally attributed to a subsector approach is the effort to expand demand and the volume of products flowing through the supply chain. It would be more productive to include distribution companies like ERIFISH and EMPC/LEDA among subsector stakeholders, and see what can be done to increase their sales, which will in turn provide demand for the artisanal fishers. The fishers in turn, should be seen as providing demand for the input suppliers, who are also a necessary part of the subsector.

The project (Dahlak Artisanal Fishery Development Project) proposes a $1.6 million EIF loan to the Semhar Fishing Cooperative Society (SFCS) to modernize fishing equipment and upgrade capacity, and a total investment by the REIP/REU of $2.7 million. It proposes exploring potential markets for the products, only after the investment has been made. The proposed EIF loan is far above the present maximum for a single enterprise, and would in fact take most of the funds remaining in the EIF. The study also reports that a previous credit scheme with a similar purpose was a failure and only 16 percent of the loan was repaid. There does not seem to be any analysis of this failure or how the new project would avoid similar problems.

The project, once established, is expected to facilitate establishment of a fish-marketing office that will "assist coop members with the marketing circuit". But as mentioned above, it fails to include those companies providing marketing services as stakeholders and participants in the project or to assess market potential prior to the $2.7 million investment. Given the lack of involvement of the marketing and the input supply firms, this does not appear to be a true subsector approach. Investing $2.7 million before one finds out if there is a market for the products the project will produce is a risky proposition, especially when previous credit interventions in favor of the fishing cooperative resulted in its defaulting on the loans. The functioning and viability of the fishing cooperative needs to be investigated before any additional funds are loaned to it.

One of the challenges for the REU is to find ways to do a study of potential markets before investing. One way is to work with marketing companies like ERIFISH and EMPC/LEDA to find out what their constraints and opportunities are and to follow up with their contacts in foreign and domestic markets to see what their constraints and opportunities may be. The same linkages may help the study find volume and price information that can help develop a better understanding of market demands and potential. Particularly in foreign markets, great attention should be paid to the standards required by quality retailers and brand-name suppliers. The Assessment Team would recommend that investigation of market potential be considered a crucial component of a subsector study, and something which must be accomplished before a major investment is made in any project.

Subsector studies may well require a multi-disciplinary approach to address marketing, subsector structure and institutional constraints, as well as technical production issues. In many cases it would be appropriate to twin one or several international consultants with one or several Eritrean consultants to produce the desired results. However, if the REU wants to engage experienced and professional Eritrean consultants, it must be willing to pay them. The REU should engage consultants on the basis of contracts with designated performance criteria and incentives, and the use of a tender for each contract should be considered. It should hold workshops to explain the REU's requirements and guidelines for conducting such subsector studies, as well as the performance criteria and incentives that will be designed into consultant contracts. Training courses should contract certified consultants as trainers, require 15 to 20 percent cost sharing, and provide a money-back guarantee that participants will achieve the skills to meet the course objective. This guarantee will however, require that the participants meet certain minimum requirements.

D.Project Management Unit (PMU) Functions

The REU has retained many of the functions of a project management unit (PMU), even though it does occupy a position in the institutional structure which would allow it to exercise oversight of CBER lending or the management of the EIF. The REU retains the responsibility of preparing the annual REIP work plan and budget. It also retains the role of monitoring REIP program implementation, including monitoring if the ECRS and EIF loan activities. It made sense for a central PMU to serve these monitoring functions for the various project components under its control and for which it was responsible. But the CBER and EIF are not under the control of the REU and it is not in a position in terms of institutional hierarchy to give direction to CBER personnel or otherwise change the behavior of the CBER.

Rather, in terms of institutional structure, it would appear that the Advisory Board is now the actual PMU of the REIP and the REU at this point serves as the (undeclared) secretariat for the Advisory Board, and monitors the REIP in that capacity. However, it is not evident that this organizational structure has ever been clarified, that the Advisory Board has been mandated to function in the role of a PMU, or that the participating institutions understand their relationships and roles and responsibilities. The monitoring responsibilities certainly give the appearance that the REU is monitoring, and possibly supervising the REIP credit programs of the CBER. Again it is the belief of the Assessment Team that credit monitoring and supervision is a banking function and should be conducted by the CBER and that the CBER should be providing that information to the Advisory Board. The Assessment Team believes that clarifying these roles and responsibilities would be beneficial to the functioning of the REIP and all parties involved.

E. USAID Environmental Regulations

USAID has declined to reimburse the CBER from the EIF fund for one large loan that included money for pesticides. As a consequence, the CBER has stopped approving new loan applications to the EIF fund that include pesticides.

USAID environmental regulations typically require mitigation efforts when pesticides are being used. Such mitigation usually translates into requirements that farmers using pesticides demonstrate that all personnel are properly trained to apply chemicals and have protective equipment. While this may be reasonable for larger commercial farms that can afford the equipment and can provide the training, it is particularly hard on smallholders that often do not have access to such training or equipment.

The application of this USAID environmental policy is having an important negative impact on efforts to increase production of cereals and other basic food staples in Eritrea, and thus, on the already difficult task of improving food security. Most able-bodied laborers are in the military and labor shortages are the greatest constraint to food production after water shortages. Herbicides substitute for a portion of this labor and help increase food production. Extension services are poorly organized, understaffed and not readily available to farmers. The protective equipment is also not readily available.

Eritrea requires international food aid to supply approximately one half of its food needs. The US government is the major source of such food aid. Improving environmental performance and avoiding death or health problems related to pesticide exposure is necessary and an appropriate objective. However, USAID needs to find ways to pursue this objective that does not result in a blanket prohibition on the purchase of pesticides under the agricultural credit program.

F. REU Findings and Conclusions

1. The decision to not allow ACDI/VOCA to staff the REU to serve as the project management unit for the REIP has had negative implications for the performance of the REU and the REIP as a whole. Coordination of the three components of the REIP has been poor and the expected synergies have not been generated.

2. The REU would benefit significantly from the expertise available through increased use of short- and long-term technical assistance, particularly given the difficulty in attracting and keeping highly qualified personnel under present conditions in Eritrea. Extensive capacity building is still required, particularly to provide or facilitate TOT to potential service providers in the private sector. The REU demonstrates a public sector bias and problems in soliciting private sector participation appear to reflect a poor understanding of the private sector.
3. The present system of processing loans is not efficient and leads to long delays. The CBER doesn't accept REU recommendations and this leads to processing in multiple understaffed regional and national offices. The REU should leave loan processing to the CBER.
4. The REU's processing of loan applications results in the release of loan funds, but often does not train entrepreneurs to develop better and more bankable businesses. As an approach to providing business development services it has been neither effective nor efficient, and has done little to build BDS capacity in the economy. The provision of BDS has proven more effective when it is driven by demand from entrepreneurs who are seeking to start or improve their businesses.
5. Poultry and horticulture are among agricultural subsectors with potential for significant economic growth, as well as contributing to food security, poverty alleviation (household income and employment) and opportunities for women to improve their economic status. However, the planned poultry and horticulture subsector activities appear to be largely focused on the production side, even though experience indicates that the primary benefits of a subsector approach stem from being demand-driven.
6. The REU and CBER both complain that business plans and feasibility studies of loan applicants are weak, particularly with regard to a marketing strategy and market information. But the project which resulted from the REU's fisheries subsector study, The Dahlak Artisanal Fishery Development Project, is also weak on marketing. It fails to address the constraints and opportunities of the input supply organizations or existing seafood marketing firms, and only proposes some marketing interventions after the investment is made.
7. With the elimination of the ACDI project office, the Advisory Board was left as the only party within the REIP with the institutional position and power to make and enforce decisions, including those regarding implementation. The REU retains many of the functions of a PMU, but does so as the defacto, but never formalized, secretariat of the Advisory Board. The institutional structure, the REU's lack of institutional status and its lack of capacity does not allow it, as presently constituted, to serve as an effective PMU. The REIP would benefit greatly from a clarification of the roles and responsibilities of all parties involved and the establishment of an effective PMU.
8. USAID needs to find ways to pursue improved environmental, health and safety objectives in a manner that does not result in a blanket prohibition on the purchase of pesticides under the agricultural credit program.

G. REU Recommendations

1. The REU should consider using more expatriate technical assistance to help train staff, and provide services which the staff does not yet have to capacity to provide at a professional level. USAID should consider placing qualified expatriate staff in the REU

to develop its capacity to facilitate the delivery of business development services (training for consultants and entrepreneurs) and agricultural business services (subsector studies and the developing a basis to provide market and marketing information).

2. The REU should withdraw from preparing CBER loan applications, providing loan analysis, and loan supervision. These are banking functions and should be done by the CBER. However, this withdrawal should be coordinated with the CBER to allow it time to increase its own loan processing capacity.
3. The REU should transition to training entrepreneurs and service providers to prepare business plans and strategies to start-up, improve or expand enterprises rather than preparing business plans for the entrepreneurs. This training should be provided in group settings, perhaps in collaboration with a university, commercial training institute or other appropriate educational facility. Given low literacy levels, it may be necessary to cost-share the professional preparation of business plans with the enterprises and certify qualified service providers. The REU should base participation of the private sector in providing BDS services and subsector studies on contracts with clear performance criteria and economic incentives. The REU should contract competent international technical assistance to work with Eritrean trainers to provide TOT to potential private sector service providers and REU staff, to help build the capacity for providing BDS services.
4. The REU should implement detailed subsector studies that provide much of the information required for business plans and feasibility studies of any enterprise in the subsector, rather than on business plans and feasibility studies for individual enterprises. Investigation of market potential should be considered a crucial component of a subsector study or project proposal. The REU should contract competent international technical assistance to work with Eritrean consultants to produce high-quality subsector studies and project proposals, and particularly the marketing aspects of those studies.
5. The poultry and horticultural activities should include detailed sector studies, a strong focus on markets and marketing information, and an effort to facilitate stakeholder participation in developing a subsector action plan. Stakeholders should self-identify constraints and opportunities and work together to see how different participants can help each other with the objective of making the flow of products through the entire sector more efficient. Subsector studies should provide factual information to help inform stakeholder decisions.
6. The REU does not have the capacity or institutional status to serve as an effective and functional PMU. The REIP should be reorganized to provide an effective and functional PMU that can make and enforce implementation decisions. The Advisory Board should serve the role of a steering committee that decides broad policy and project direction.
7. Since appropriate protective equipment and training in proper pesticide application are not readily available in Eritrea, and particularly to smallholder farmers,
8. USAID environmental mitigation efforts should focus on (continuous) improvement of the availability and use of protective equipment and safe pesticide application procedures, rather than making their availability and use a precondition for reimbursing loans that contain funding for pesticides.

SECTION V

Agricultural Subsectors with Opportunities for Economic Growth

The Assessment Team has identified a number of agricultural subsectors that from our brief and preliminary appraisal, appear to provide opportunities for economic growth and increased food security. Some may have interesting export potential. Others like poultry and dairy have primarily domestic potential. However, the potential that the poultry and dairy subsectors offer for economic growth as well as improving household incomes and nutrition, and eventually impacting regional or national food security and protein availability, make them particularly attractive.

Conducting detailed subsector studies or marketing studies was neither part of the team's SOW nor practical in the timeframe in which the team worked on this assessment. Before investing in any of the subsectors below, more detailed studies and updated information are required. However, the team rarely found market studies available even when a subsector study had supposedly been conducted. This lack of market information is in fact one of the greatest constraints to both strategic planning for the agricultural sector and the development of viable private sector enterprises that contribute to economic growth and food security.

The Eritrean government is very interested in expanding exports from a very small export base, but Eritrean exporters have very little experience in competitive markets over the last 30 years and the markets in which they were involved prior to Eritrea's being annexed by Ethiopia have changed dramatically. Many of the fruit and vegetable producers say they expect to export produce to Saudi Arabia, even though Saudi Arabia now exports many of the same products that Eritrea once exported there. Given the lack of experience in competitive markets, few Eritrean producers or marketers have honed the skills necessary to supply products that meet the quality standards of higher income country markets. Eritrean horticultural enterprises, for example, need to first target and win domestic high-quality niche markets to gain the experience necessary to become competitive in export markets.

While controlled by Ethiopia, most of Eritrea's trade was with other parts of Ethiopia. Ethiopia provided a protected market that accepted, and allegedly restricted Eritrea producers to supplying, cheap products of mediocre quality. Eritrean exports have never been sufficient to cover import needs, but even what exports it had have fallen sharply since the conflict with Ethiopia. Until Eritrea can substantially increase exports, it is highly dependent upon remittances from the diaspora and donor assistance to maintain macroeconomic stability. While increasing exports may contribute to macroeconomic stability, the short-term export prospects in the agricultural sector are rather limited, with the exception of fisheries, preserved (wet blue) hides, lint cotton, and possibly live animals or ornamental horticulture.

One of the stated long-term roles of the government is to establish transparency and good governance in public sector management, but this transparency is constrained by the role of the Peoples Front for Democracy and Justice (PFDJ) in "private sector" activities. GOE policy is to have the party invest in those areas of the economy where the private sector is unwilling to invest. However, the GOE and party still own numerous enterprises throughout many sectors of the economy, and not just those in which the private sector is absent. There are numerous reports of entrepreneurs starting a promising venture and then finding that the sustainability of that venture was compromised by competition from PFDJ owned companies. There appears to be a social value operating that finds it hard to tolerate that an individual or group of entrepreneurs should make a lot of money from a successful venture. This behavior by the party is incompatible with encouraging the private sector and particularly the diaspora to invest in Eritrea. Party ownership of companies is not transparent and the private sector is loath to invest in any sector where it will face competition from party-owned companies. The fear of unfair competition from party-owned companies is a strong deterrent to investment in Eritrea, even by the diaspora. The GOE should pursue the privatization of both parastatal and party-owned companies.

A. Cereals, Pulses, and Oilcrops

Eritrea produces only about 40 percent of its basic food needs. For the sake of improving food security and reducing its huge requirements for food imports, it would be greatly advantageous if the production of rainfed cereal and other basic food crops offered economic growth opportunities. However, demand for these products, particularly cereals, is heavily impacted by the GOE's management of commercial and concessional food imports. The Grain Board typically arranges for sufficient commercial imports and food aid to keep the prices for basic food crops at modest levels. Given these modest prices, farmers typically can not expect investment in expensive irrigation technology to be profitable if used to produce basic cereal crops. (Spate irrigation is a low-cost alternative, but can only be used in select locations with the right conditions.) Without irrigation, or at least water harvesting, water conservation or other improved dryland farming practices, farmers have to expect that drought may cause the crop to fail three or four years out of ten. Under those conditions, farmers will not intensify production, and even investing in the cost of fertilizer is highly questionable, both technically (it may burn the crop in years of moisture stress) and economically (unless, and perhaps even if it is, heavily subsidized). Given these constraints, the cereal subsector does not appear to provide promising returns on investment for private sector commercial farmers.

Pulses and oilcrops tend to bring better prices than cereals but productivity is low and costs of production, particularly labor costs, are high. Sesame is a traditional cash crop, but is labor intensive and most information providers suggested that it can not be produced profitably in the present labor crisis. There is rumored to be a good market for snack peanuts, but Eritrea's peanut subsector is not oriented toward or competitive in the production of the large peanuts used in the snack industry. An Israeli company was willing to contract for the production of sunflower seeds, but the project had trouble finding enough bees to pollinate the flowers. Highland farms find a good market for chickpeas, faba beans and lentils, but one rarely sees a farmer use the strategy of growing primarily pulses and using the income to buy cereal to meet the family's food needs. It would appear that farmers are not confident of finding cereals at a reasonable price if they should adopt that strategy.

B. Poultry

There seems to be a growing demand for both chicken meat and eggs. To date, most chicken and egg production is done at the household level and is managed by more than 10,000 women as a backyard activity. Household production typically entails only a handful of chickens fed with household scraps and bran from flour preparation. Although small-scale, the cash generated can make an important contribution to meeting household needs and the occasional egg or serving of chicken meat helps improve family nutrition. Most of the larger cities in Africa have established commercial or semi-commercial poultry and egg production in their peri-urban fringe. The larger scale of production helps to meet the urban demand and to keep the cost of that meat lower, so more people have access. This semi-commercial poultry production is only beginning to develop around Asmara and other Eritrean cities. Although there are a number of constraints in the poultry sector including importing day old chicks, access to the medicines and vaccines needed to keep the chickens healthy, improved organization of marketing and a scarcity of brooder facilities; the primary constraint is feed. Eritrea is a cereal deficit country so using cereals for livestock production is both an issue and expensive. There are only three small capacity mills producing livestock feed. One entrepreneur indicated that he was interested in producing livestock feed, but found that import restrictions would not allow the importation of the supplements required to produce a quality product. He reported that a complete chicken feed can be imported from Kenya cheaper than he could produce an acceptable feed product in Eritrea. But there is a question whether or not entrepreneurs will be allowed access to foreign exchange at the official rate to import chicken feed. If they have to import the feed using black market exchange rates, it will cost an additional 50 percent and the cost advantage over local production is lost. Since feed is the major cost and greatest constraint in chicken production, lowering feed costs is the fastest route to lowering chicken meat and egg costs.

The REU has identified poultry as one of its two priority subsectors and has begun efforts to improve the sector by offering training to enhance the capacity of poultry farm managers. It will also consider offering direct assistance to help entrepreneurs overcome constraints identified through training and technical assistance. (Please see the REU Component for additional information.)

C. Horticulture

Interviews with a few dozen farmers, bankers, development workers and consultants revealed the export of vegetables and fruits to the Saudi Arabian market as the goal of virtually every horticulture project. However, recent market studies show that opportunities today may be very different than they were in the past. Furthermore, market prices for graded products in Jeddah are often lower than market prices for ungraded produce in Asmara.

C1. Vegetables

The Saudi government has reduced subsidies and water allocations for the production of basic cereals. In turn, many irrigated grain farms have turned to field-scale vegetable production resulting in massive increases in supply and corresponding reductions in imports. Vegetables are produced throughout the year in greenhouses and in open fields in the winter. Saudi production

of vegetables has risen from supplying 65 percent of local consumption the early 1990s to 85 percent at the end of the 1990s. Local producers are now exporting surplus vegetable production to regional customers such as Qatar, Bahrain, and Kuwait. The largest declines in vegetable imports are potatoes, tomatoes, cauliflower, green beans, cucumbers, pumpkins, and egg plants. Unfortunately, peak harvest seasons in Saudi Arabia and Eritrea largely coincide; implying Eritrean produce faces low demand and low prices.

The Saudi government has given local products preferential treatment in the produce auction markets, selling local production first followed by imports. Accordingly, many buyers have made their purchases and have already left the market site when imports are auctioned later in the morning. The Saudi government has also formed a new marketing company that buys directly from local farmers and sells their produce through 19 new marketing centers throughout the nation. This produce has a location and cost advantage as the middleman for local production is thus eliminated while importers must still sell through middleman.

Imports are still made from Syria, Lebanon, Egypt, Turkey, Iran, the USA and Holland, but primarily target high-quality, high-value niche markets. In the past, imports from Arab League countries entered duty free while imports from other nations, such as Eritrea, incurred a 12 percent duty. This practice has been changed and now non-Gulf Arab nations such as Egypt also incur this 12 percent duty. Past practices of understating the value of imports in order to reduce the impact of duty costs has been eliminated in vegetables through the use of per unit duties.

Eritrean exporters would incur other costs as well. Importers typically charge a 5 percent commission. To establish a position in the market, a new supplier would have to sell at prices below those of the competition, say by 10 percent in the first year and 5 percent in the second year (assuming similar quality, a big assumption). Costs such as sea and air transportation and port handling costs are higher as well – Saudi Arabia does not allow refrigerated containers to leave the port area, thus requiring that the produce be handled an extra time.

C2. Fruit

Among the fruits produced in Eritrea, only oranges and bananas are produced in sufficient quantities for volume export to the Saudi market. As with many vegetables, fruit prices at the Asmara market are higher than in the Jeddah market. In the long term, as Eritrean production and supply to the local market is increased and local demand is satisfied, prices may fall to a point where Jeddah prices again look attractive. However, at present, fruit exports to the Saudi market do not appear to be likely.

The potential for exporting bananas to Saudi Arabia has been investigated. Problems have included quality of local produce (examples: handling and transport damage from throwing bunches on trucks with little or no packaging), less desirable varieties of bananas. Limited production at a point in time, lack of a clear price advantage and the lack of organized marketing made it difficult to assembling sufficient quantities to fill a refrigerated container or ship’s refrigerated hold.

C3. Vegetable and Fruit Opportunities

Interest has been expressed in Eritrean onions by Saudi importers. Studies indicate demand for Eritrean red skinned cultivars and few Saudi produced onions are available when Eritrea's production would hit the market. Market information needs to be updated. If still promising, onions could provide the basis to establish Eritrea's identity in the Saudi market as well as providing a basis for adding other product lines.

A different opportunity exists for the establishment of Eritrean small-scale, high quality vegetable farms. Substantial air imports continue undiminished from Europe and the USA into the Arabian luxury markets such as specialty shops, hotels, restaurants and caterers. Products to be investigated include iceberg lettuce, red lettuce, endive, broccoli, fennel, vine ripened tomatoes, celery, and green peppers. Some specialty production currently exists in Eritrea. These small farm areas are producing high-value, quality produce for the local specialty and expatriate markets including hotels, restaurants and foreign military forces.

Bananas and oranges comprise 75 percent of Saudi fruit imports. Early trials on growing quality table grapes and strawberries and further trials on producing high quality mangos and melons are under way in Eritrea. If these result in products suitable for the Saudi market, they could provide the opportunity to establish Eritrea's reputation as a quality supplier and provide opportunities for adding other product lines in the future.

C4. Ornamentals

At least one farm is producing ornamental crops for export to the European market. This Asmara flower and strawberry farm has produced *limonium sinuatum* (statice) flowers in high quality and large quantities. Their exports of this crop realized some of the highest prices for imported statice in the Dutch auctions. They have extensive trials underway of various rose varieties and other flowers and fruits. Interestingly, the shortages of quality flowers in the local market have resulted in some varieties receiving better prices in the local market, than in export markets. Since transport and handling costs are an important part of the costs of exporting, a number of varieties are more profitable when sold locally than when exported. However, the local market cannot absorb their full production. Their strawberry sales to date are either to the local specialty market or are exported to Europe. However, export to Arabia could be explored.

Asmara offers a unique growing area for ornamental crops. Its semi-arid climate reduces the need for greenhouses for some crops. Its altitude results in slow growing flowers that, because of their larger size and weight, are of high quality and desirability. One unique feature of the farm management is its regional character. Eritreans and Kenyans provide management and technical expertise.

Problems include the availability and cost of air cargo services, specialty chemicals, and bridging loans. East African flower producers often use independent charter cargo flights to transport flowers to Europe. The Assessment Team has heard mixed reports about whether such charter flights are granted landing rights in Asmara. Given reports of major airlines leaving flowers on the runway when they have a higher than average passenger count, and the high cost of shipping to Europe via Nairobi, a policy of excluding cargo charters would have a very negative effect on

exporters dependent on air freight. For most ornamental crops, Eritrean exporters may only be competitive if transport costs can be reduced significantly from the approximately $3/kg charge for European freight via Nairobi.

Another possible opportunity would be to produce ferns, particularly for the Gulf States market and possible South Africa in season. Ferns should grow well at the altitude and climate found in the Asmara area. Ferns are much less perishable than most flowers and can be shipped by sea in refrigerated containers. Given the importance of transportation in total costs, Eritrea's proximity should give it a significant competitive advantage on producing ferns for the Mid-East markets.

D. Dairy

Like poultry, dairy production has the potential to improve household incomes as well as food security and nutrition. The demand for dairy products is also reported to significantly exceed supply even though prices of the limited milk available are quite high. Under DANIDA support: 1) The Asmara Dairy has been privatized, is now operated by the dairy farmer's cooperative, and showed a profit for the first time; 2) Three collection centers serving approximately 1000 small holder dairy farmers have been established; and 3)Community dairy farms are operating at Sutur and Hagaz. These actions provide a basis for continued efforts to expand commercial dairy activities in the Asmara area. To date, the formal dairy sector seems to be focused on providing pasteurized fresh milk. As the market develops, the formal diary sector will likely move on to producing value-added products such as yogurt, soured milk, butter and cheese, and leave the provision of fresh milk to the informal sector.

The expansion of a commercial dairy subsector in East Africa has typically been linked to the rearing of one or two crossbred cows by peri-urban smallholders. When properly fed, usually using cut and carry stall feeding, these cows can produce 5 to 10 times the milk of traditional cows in grazing systems. Even two cross-bred cows can often double household income and may require the family to hire labor to help feed and care for the cows. In addition, consuming even a liter of milk a day can substantially improve family nutrition, and particularly children's protein consumption. Commercial dairy operations also provide an outlet for milk produced from local herds using traditional grazing systems.

It is also possible to establish dairy processing in smaller towns outside Asmara. Several sources produce small-scale dairy processing plants that can be placed and operated in a cargo container. These systems can also produce butter, yogurt and soured milk as well as pasteurized milk. In Senegal there is a project that intends to place one of these containerized dairy processing plants on a truck and move it to where the traditional herds are grazing.

USAID helps funds an East African regional dairy program and supports the dairy subsector in several countries. These programs include support for management and marketing by commercial dairies and dairy associations, artificial insemination to promote cross-breeding, and support for the placement of cross-bred heifers at the household level after providing training to those households.

E. Animal Fattening

Animal fattening activities can also take place at several levels. Small-scale fattening of small ruminants is one of the popular income generating activities for programs targeting rural women as beneficiaries. Many animal fattening programs target selling the animals at religious holidays, both Islamic and Christian. Since many families that can afford to, buy and fatten sheep to butcher on religious holidays, most people know how to feed and care for the animals using a combination of pasture, grain stalks, empty grain heads and husks, bran removed from cereal in the process of making flour and household wastes. In peri-urban households, this may be supplemented by the purchase of hay and grass and bi-products from agricultural processing industries.

Several of the large farms recount purchasing lots of 5000 to 10,000 sheep for fattening and export to the Gulf States and other Islamic countries, primarily to Saudi Arabia to help feed pilgrims during the Haj. They also produce or purchase grass, hay and bi-products from agricultural processing industries, for example pelleted sesame meal. As with poultry production which targets many of the same feed sources, the availability and cost of feed is a constraint.

Recently a greater constraint to exports to the Gulf was the ban imposed by the Gulf States on livestock from East Africa related to Rift Valley Fever. The Eritrean Livestock Service claims that Eritrea has been certified as being free of Rift Valley Fever so that the ban should not apply. If true and respected by the Gulf States, this would give Eritrea a significant advantage, providing access to the Mid-East markets for live animals at a time when other large exporters such as Sudan, Ethiopia, Somalia and Kenya faced a major constraint. However, it is not evident that this is what has happened. Small ruminant exports say that after the outbreak demand fell sharply for all livestock originating in East Africa. It seems probably that the Ethiopian invasion in 2000 greatly diminished the supply of live animals available for export and disturbed animal production patterns. Many Eritreans lost their livestock during the invasion and there is a major effort to rebuild family herds as part of the emergency reconstruction process. It certainly seems worth investigating whether those export activities can be re-established, particularly if Eritrea can convince Gulf State consumers that Rift Valley Fever is not present in Eritrea.

F. Hides and Skins

Eritrea has large areas of arid and semi-arid ecosystems that are perhaps most productive if used to produce grass and pasture for rearing livestock. Much of the population of Eritrea has pastoralist and agro-pastoralist traditions. The country has a large livestock population and a significant number of animals are slaughtered each year. Demand for hides by a viable hides and leather industry might increase household incomes by 5 to 10 percent, per animal slaughtered.

The tannery industry is one of the few Eritrean businesses with past experience in exporting to non-Ethiopian markets. Recent figures indicate hide and leather sales of $2.4 million, of which 96 percent was the sale of hides and only 4 percent as finished leather. Hides are exported primarily as “wet blue” (these hides are preserved with chromium-based solution that gives them a blue color) and principally to Europe, although also to China and the US. Exports are made by sea in non-refrigerated containers and local packing materials meet the requirements of the importing countries. Small exports of specialty leathers are largely to Italy, Russia, and Far

Eastern markets. The Eritrean Leather and Allied Industry Association (ELAIA) has formed a productive association with the American Leather Association, attended the 2001 Miami Leather Association Trade Fair with USAID support, and plans to return in 2002. It is believed that AGOA certification of Eritrea would catalyze an expansion of this relationship.

Present market demand for wet blue hides is reported to exceed twenty containers per month of cattle, goat, and sheep hides (a potential market of over $15 million a year, with little marketing effort required), while current exports are equivalent to around three containers per month. The chairman of ELAIA expressed satisfaction with the profitability of the production of wet blue hides for export. However, tannery effluent, particularly heavy metals like the chromium used in wet blue processing, is a potential health and environmental problem if not properly treated. Procedures to collect and reuse the chromium have been found to actually reduce processing costs in some tanneries. These technologies need to be explored.

F1. Potential Actions and Results

Hides and leather form part of a potential competitive cluster linked to Eritrea's tradition of livestock rearing. In the long-run, one would hope to see a vertically integrated subsector producing value-added leather goods and providing substantial employment. However, the short- and medium-term vision is quite different. There is at present, much greater demand for wet blue hides than for Eritrean leather as export products. Tannery production of finished leather is near capacity and the local market absorbs all but a small fraction of finished leather production. The tanneries do not have the capacity to produce leather of the quality demanded on the world market. It makes little sense to undertake the investment to upgrade the tanneries, until a particular market with specific leather quality criteria has been identified.

The leather goods export industry is similar to cotton apparel manufacturing in that it depends largely on cheap labor and transportation and marketing prowess. If Eritrea wants to produce leather goods it should establish close relations with importers and major suppliers in high-income markets, and import high-quality leather which will allow the production of high-quality leather goods that are in demand in high-income markets. Both product quality and establishing close links with and guidance from major players in those markets is critical to Eritrea's achieving entry into those markets. If Eritrea establishes a leather goods export industry, it will provide the demand for leather which meets specific criteria, which will provide the basis for upgrading Eritrean tanneries. Only at that point would Eritrea have the means to develop an integrated, value-added hides and leather subsector.

There are substantial opportunities for increasing the quality and the quantity of raw hides as well as for increasing value by better grading, classification and selection of hides. Short- and medium-term results can be obtained through a targeted campaign to persuade the tanneries of the advantages of differential pricing for raw skins based upon quality. The second stage of this campaign would be to educate the collectors and abattoirs. Finally, a public information campaign would be implemented to educate farmers/ranchers/households on how to achieve skin quality and accordingly get more for their skins.

G. Sea Fisheries

Eritrea has a 1,250 km long coastline along the Red Sea and more than 350 islands are included in its territorial waters. The estimated sustainable yield for Eritrea's territorial waters ranges from 50,000 to 70,000 tons per year. In 1998, the officially reported catch was only 2000 tons. In spite of exploitation by foreign commercial trawler fleets, natural stocks reportedly remain high and coral reefs are largely intact but are fragile. If these estimates are correct, fisheries revenues could exceed $20 million per year, giving fisheries the potential to constitute Eritrea's single largest source of exports for the near- and medium-term.

Using foreign and/or Eritrean commercial fishing trawlers would be the fastest way to increase the annual catch, but the risk of over fishing and reef destruction is enormous, and fishing fleets are notoriously difficult to monitor and regulate. An alternate and more sustainable option would be to expand artisanal fishing using smaller vessels. Artisanal fishing has the highest potential of contributing to the employment of demobilized military personnel, of utilizing local boat building experience, and building skills to eventually establish a small-scale fleet fishing. .

There are several fish and seafood exporters and distributors:

Eri-Fish has a modern plant in Massawa equipped with basic processing facilities and a cold room. It buys fish from artisanal fishers and delivers whole, gutted, frozen fish to the Europe, packed in refrigerated containers for sea transport. It currently exports 150 tons of frozen fish every month to final markets in the Netherlands, Germany, and Britain. While these markets may prefer whole fish, future opportunities exist for adding value by the production of filleted grades for other regional markets.

Eritrean Maritime Products Company also receives virtually all of its fish from artisanal fishers. It is believed to operate facilities in Assab, Massawa, and Asmara. The processing facility ownership is reported to be 94 percent by the GOE and 6 percent by Norwegian investors and has a daily capacity of 15 tons of frozen fish using a blast freezer. Actual export quantities are far lower than this capacity due to degradation of equipment. Exporting is by sea and by air from its facilities in Asmara.

Osaki Fish is reported to be a joint venture between the GOE and a Sri Lanka investor that harvests and exports sea cucumber to Asian markets. The sea cucumber has a value approximately twice that of shrimp. Investment was augmented by an ERN 800,000 local loan. Based in Massawa, it employs 360 fishers and 12 management and administrative personnel. Utilizing ten fiberglass boats, scuba divers harvest sea cucumber from the Massawa area at present and expansion down the coast toward Assab is planned. Further investigation would be worthwhile to determine opportunities for additional artisanal supply of sea cucumber.

Seawater Farms Eritrea is funded by a consortium of investors and the GOE. This shrimp, tilapia, and asparagus (salicornia) aqua farm and artificial mangrove wetlands project began to export shrimp to Europe and the Middle East in June 2001. The business plan called for rapid expansion of production and exports reaching US$40-50 million by 2003. The war, lack of labor, and disagreements within the investor consortium has delayed this expansion. The philosophy and integrated system envisioned by the project are extremely ambitious. The core business of

shrimp farming (said to be 80 percent of current income) would appear to be economically viable if the project is technically and environmentally sustainable. Both local tiger shrimp and imported pacific shrimp are used, in part because of the pacific shrimp's lower susceptibility to disease problems.

The project claims that it is a closed system so that water returning to the sea is non-polluting. It has made a major investment in mediating possible negative impacts on water quality by reusing the water on salicornia and establishing an artificial mangrove wetland to filter and improve water quality. The closed system was barely maintained in the face of extreme flooding during the 2001 rainy season. The claim that there is no possibility of the pacific shrimp escaping into the Red Sea and upsetting the environmental balance seems highly optimistic. For example, it would appear that a couple of pelicans collecting shrimp from the tanks or canals and returning to the sea could potentially release pacific shrimp.

The short-term objectives include the expansion of their existing 90 shrimp tanks to 330 tanks (Each tank is three hundred square meters and can accommodate up to two hundred thousand post larvae shrimp). Mid-term goals include supplying shrimp larvae to artisanal producers – out growers – and expansion to perhaps 5 separate tank farms up and down the coast, each approaching the size of the projected 330 tank unit planned for the present site. International market demand for shrimp is reported to far exceed supply.

G1. Artisanal Fisheries

There were roughly 500 registered artisanal fishing boats and 2,100 fishers around Massawa in 1997. Lesser numbers of fishers operate in the Dahlak Islands, the Galalo area and other coastal communities.

Catches are maintained fresh using either pounded or flaked ice although ice availability is limited. Icing is effective for a "normal" eight hour fishing trip, but many fishers are reportedly out far longer than 8 hours. Gillnets or hook and line are normally used. Fishers grade their catch into three categories: grade one for export and grades two and three for the local market. Exporters in turn grade the export grade into their own categories – each has its own criteria.

There are at least three fish markets in Asmara. In general, fish in the local market is not identified by species and is uniformly priced. Fish has not been a part of the traditional Eritrean diet but marketing and promotion campaigns by the Ministry of Fisheries have been started and could be supported. Local demand in major urban areas is growing, as more Eritreans understand the nutritional value of fish and preparation methods. Increased production will reduce prices to a more competitive level against more popular meats while contributing to national food security.

G2. Potential Actions and Results

Artisanal fishing should be encouraged. Benefits would include increased protein availability; increased export and foreign exchange earnings; increased employment opportunities, income and standard of living of fishers, handling and processing workers, and transportation and

distribution workers. An artisanal approach would be more sustainable and less harmful to the coastal environmental than fleet trawler fishing.

Technical assistance and technology transfer, training, and improved access to financial services could contribute to production and productivity, which in turn would increase employment and improve family income. Support could include establishment of supplier biased pricing such as simple auctions, providing market price information by species, and the Ministry of Fisheries consumer education program to increase local demand. Vocational training programs could be supported for new entrants and to improve present fishers' skills. Meetings between the fishers, input suppliers, distributors, the exporters, the Ministry of Fisheries, and the fishers' trade organizations would be productive in establishing common standards and goals, and beginning a process to resolve problems encountered by subsector stakeholders.

Shrimp farming may have a big future in Eritrea. The establishment of an artificial wetland demonstrates a significant effort to mediate negative environmental impacts. But whether or not the concept is technically and environmentally sustainable still needs to be demonstrated. In the meantime it should be carefully monitored. There are strong grounds for fear that pacific shrimp will escape into the Red Sea. While the impact of this new species on local ecosystems is unknown to the Assessment Team, one must assume that there is the potential for significant environmental and economic impacts on Red Sea fisheries.

H. Cotton

Cotton has significant potential to become a competitive cluster in the long run, but faces many constraints in the immediate future. As in hides and leather, it may be necessary to have a dualistic strategy in the short-and medium-term, of exporting relatively high quality, high value lint cotton, and importing cotton fabric and yarn that meets the needs and specifications of markets for cotton apparel manufacturing. When markets have been found and specific lines of cotton apparel have been established, then it may be possible to update the textile manufacturing components to meet the needs of those cotton apparel manufacturers. If that happens, it may then be possible to reintegrate the subsector as a value-added competitive cluster.

Eritrea has some established cotton production and significant production potential in the Southwestern Lowlands, particularly at the state-owned Alighidir farm. Alighidir is a complicated situation in its own right. Alighidir was once owned by the same Italian firm that owned the large Asmara Textile factory. Both were nationalized by the Derg. Alighidir has a diversion dam on the Gash River and diverts enough water to irrigate about 4000-5000 ha of the 16,000 ha total area. The irrigated land is used largely to grow cotton, while the rest is used for rainfed agriculture and livestock production. In addition to a cotton gin, Alighidir had seed delinting and seed conditioning plants, an animal feed plant and a briquette plant that made briquettes from cotton and sorghum stalks. The farm was occupied by the army from 1993-97 and following demobilization 1100 ex-fighters were each given 2 ha, with the idea that they would function as outgrowers producing cotton with mechanization and extension service provided at cost by Alighidir farm. At one point it appeared that large farm concessions like Alighidir would be parceled out and turned over to ex-fighters. All but about 250 of these ex-fighters were reactivated and left during the new hostilities with Ethiopia, although many of their families remain. All of Alighidir's plants, building and the water diversion dam were destroyed

by the Ethiopian invasion. Loose seed cotton now has to be shipped to Asmara for ginning at the Asmara Textile Factory. Transportation of loose seed cotton is expensive and achieving competitiveness will be difficult with this added cost. The gin and delinting plants were made in the US, and would cost over $5 million to replace. In 2000, the GOE decided to privatize the Alighidir farm and include it in a package with the Asmara Textile plant, in the hope that the integrated cotton farm, textile plant and garment manufacturing would be an attractive package for purchase by a private investor. There has reportedly been some investor interest but there has been no purchase to date.

Eritrea has five large textile and apparel manufacturing plants in Asmara, one private, two recently privatized and two still government owned; and a number of smaller garment and sweater manufacturers. The largest, the state-owned Asmara Textile Factory, was unable to pay for much of the cotton it purchased last year from the Alighidir cotton farm near Tessenei. It produces a variety of products using 27,000 spindles and ancient looms, which are obsolete and questionable whether it is even advantageous to continue their use. The cloth which they can weave is too narrow to be used in most current applications. It exports one million T-shirts a year, but in the process produces an additional 1.5 million defective T-shirts that can not be exported to higher-income countries. In the near term, it may well be more economic to export Eritrea's high quality lint cotton and import the fabric and yarn required for the cotton apparel manufacturing.

The yarn spinning and fabric weaving components of the textile plants are capital intensive and fabric and yarn specifications vary significantly among different types of garments. It would be better to wait until the Eritrean garment manufacturing industry had determined markets and then replace the spinning and weaving components with equipment that would produce the fabric and yarns required by the local garment manufacturing industry.

Eritrea has several smaller garment manufacturers, particularly in sweaters, which are reputed to continue exporting quality products to Europe and other high-income markets. These manufacturers do primarily import the textiles they need to meet quality requirements of these markets. These firms could potentially expand or help market the products of other firms in the export markets in which they are already players. Cotton apparel manufacturing is highly price competitive (The average value of imports by country under AGOA changes radically from year-to-year depending on shifts of a few cents in average garment cost per country.) Eritrea has a 2 percent customs duty and a 3 percent sales tax that would likely need to be reduced for garment manufacturers to be price and quality competitive.

Eritrea is in the process of establishing an (export) free zone in Massawa. But the labor needed for garment manufacturing is in Asmara, many will not be comfortable living in Massawa's hot climate, and inciting laborers to move would likely increase the average cost of the products. For garment manufacturing and a number of other price-competitive export activities (leather products) it may be necessary to allow individual factories to be established as free zones.

I. Findings and Conclusions

1. The lack of market information is one of the greatest constraints to both strategic planning for the agricultural sector and the development of viable private sector enterprises that contributes to economic growth and food security.
2. The fear that party-owned companies will step in to compete with enterprises that establish ventures with good profit potential is a strong deterrent to investment in Eritrea, even by the diaspora.
3. Eritrea needs to rebuild its export sector with a view toward competitiveness, but recognize that this will be a long-term proposition. Eritrean exporters have little experience selling into highly competitive markets that demand high-quality products. Some potential exporters can gain experience and hone competitive skills by targeting high-quality niche markets (eg. better restaurants and hotels, UMEE) within Eritrea.
4. Commercial or semi-commercial poultry production is successful in most peri-urban areas throughout Africa, but is only beginning in Eritrea where demand for chicken meat and eggs appears quite high. While there are a number of constraints, the key constraint is feed. If solutions to the feed constraint can be found, it should also be successful in Eritrea. This may require importing complete feeds from a neighboring country, given the shortage of cereals in Eritrea. A vibrant poultry subsector would make an important contribution to food security, household nutrition, and women's income. At present, most chicken production is done by women in their backyards. It should be possible to integrate household and commercial production in the poultry subsector.
5. Like poultry, dairy has great potential to improve household level food security and nutrition, while at the same time providing a major source of income for participating households. The basic dairy infrastructure has been established around Asmara and can serve as one focus of a dairy subsector activity. Small-scale processing units likely have the potential to help develop a dairy processing industry in smaller towns. USAID funded dairy programs have successfully helped improve commercial dairy processing and household level production. The development and introduction of cross-bred cows through artificial insemination along with stall feeding have helped intensify milk production and dairy profitability.
6. Animal fattening appears to have significant potential at the household level, where it is often done by women and helps increase and diversify household income controlled by women. Animal fattening also appears to have significant potential at the commercial level, with commercial activities focused on meeting urban demand and export possibilities. Eritrean livestock producers may have an opportunity to increase live animal exports to the Mid-East if they can convince Gulf State consumers that Eritrean livestock are free from Rift Valley Fever.
7. Exporting wet blue hides is a short- to medium-term opportunity for earning foreign exchange. If an incentive system can be devised, more and better quality hides can be collected to expand this opportunity. Successful manufacturing of leather goods depends much more on cheap labor and marketing connections than on the supply of hides and leather. Eritrean tanneries are largely obsolete and do not have the capacity to produce the quality of leather required to produce high-value leather goods that will find a market in high-income countries. Investment should be demand led. Initially Eritrea should import high quality leather for use in establishing a leather goods

processing industry that is guided by a close relationship with someone who is already a major player in high-income country markets. Once the leather goods processing industry is established and viable, then investment in the tanneries to produce the leather it is using should be investigated. If tanneries can produce the quality leather that the leather goods processing industry needs, and if the hides collected in Eritrea can be used to produce that quality of leather, then it will be possible to develop value-added throughout the subsector.

8. Estimates indicate that Eritrea could sustainably produce a large volume of fish and seafood annually and it is likely that an export market exists for much of what could be produced. While trawlers could help reach that capacity quickly, they tend to over fish and harm reefs, and are notoriously difficult to monitor. Artisanal fishing would increase employment opportunities and reduce the risk of exceeding sustainable yields and harming the reefs, and thus compromising potential tourism. Artisanal fishing has potential, but the subsector needs to get itself better organized to internally solve some of the constraints facing fishers, input suppliers, marketers and distributors. The subsector would benefit from training, technical assistance, and increased capital investment.
9. Shrimp farming appears to have significant economic potential. Although there is a great effort to mediate environmental impacts, it may face serious technical obstacles (shrimp health) and the possibility of releasing an exotic shrimp species raises the issue of potentially significant negative environmental impacts on the Red Sea.

J. Recommendations

1. USAID/Eritrea should explore the possibility with the GOE of increased privatization of parastatals and party-owned companies, particularly those in targeted subsectors, to increase the potential for private sector investment.
2. A subsector approach should be adopted by USAID/Eritrea in identifying where to provide support and funding for enterprise development activities. The impacts on the domestic economy and food security as well export potential should be analyzed in choosing subsectors to support. Preliminary investigation indicates the following agricultural subsectors have potential for economic growth:

    - Poultry
    - Horticulture: ornamentals, vegetables and fruit
    - Dairy
    - Animal fattening
    - Hides and leather
    - Fisheries
    - Cotton

3. Detailed subsector studies should be undertaken to confirm this potential and provide factual information on constraints and opportunities that can guide actions to develop each subsector. These studies and activities should place an emphasis on markets and market information and provide much of the information needed for feasibility studies by individual enterprises in the sector.

4. In poultry, dairy and animal fattening, activities should be considered at both the microenterprise and commercial levels, with efforts made to integrate the two.
5. If hides and leather or cotton are chosen, a dualistic approach should be developed which exports high quality unprocessed raw materials in the short-term, while attempting to expand the cotton apparel and leather goods manufacturing aspects. Upgrading the tanneries and textiles should not be supported until cotton apparel and leather goods manufacturing have expanded and appear sustainable, and therefore provide the demand for whatever products the tanneries and textile facilities will be upgraded to provide.

SECTION VI

Assessment of IO 2 Microenterprise Development Activities

A. CARE Community Based Savings and Credit Association Project

The underlying goal of USAID/Eritrea in providing support to the CARE Community-Based Savings and Credit Association Project is to provide assistance to vulnerable rural households in achieving food security, by means of a strategy of supporting those vulnerable groups, predominantly women, to develop and run viable microenterprises. The clients served by this program are largely vulnerable women who have been assisted by the program to start and operate microenterprises outside their homes for the first time. With access to savings and credit, they have been able to establish and run enterprises for which they control income earned and assets. Most of the women interviewed would have had no effective means of starting these enterprises without this assistance. This is a target group which doesn't seem to be targeted by other providers in the hierarchy of Eritrean credit institutions.

Project objectives were to:

- Improve the income security of 660 vulnerable households in targeted rural communities through the establishment of 22 mature community managed savings and credit associations (CSCAs).
- Build the capacity of two or more Eritrean NGOs (initially VISION Eritrea and HABEN), to establish and support these CSCAs.
- Prove the hypothesis that poor households in rural Eritrea can mobilize their own resources through the discipline of savings and dynamic management of community based organizations, in order to (a) make risk free cash available to households at critical times of the year and (b) diversify household income sources by engaging in new types of income generating activities.

USAID/Eritrea has obligated $380,000 for this pilot program to operate over an 18 month period as one of the activities initiated under the Crisis Modifier. CARE International began operations in August 2001, to build the capacity of two local NGOs (VISION Eritrea and HABEN), to develop savings and credit groups among vulnerable households, in three target zobas: North Red Sea, Gash Barka and Maekel (Central zone).

As of June 2002, the project has established 18 of the 22 CSCA targeted and serves 533 of the 660 members targeted. While many of these associations were still in the development phase, 16 had begun to use savings to provide credit to members. A total of ERN 178,290 ($17,829) in savings had been mobilized against a target of $42,800 and 284 loans totaling ERN 164,815 ($16,481) had been disbursed. Initially, participants typically take loans of ERN 1000 ($74) to start and capitalize enterprises in vegetable production, livestock, petty trading, small shop keeping, weaving and mixed small scale farming. While the initial average loan size is small, the women tend to borrow more each time with good repayment. According to program field staff, women borrow according to carefully thought out uses for the money, so that they aren't taking

more than they can repay. Loans under this scheme are extended to members within the groups at the rate of l0 percent per month, for terms of generally 3 to 4 months, as set by the group. The current loan recovery given by the staff was 98 percent.

In the CARE project groups, about 60 percent of the members are women, all of the women are savers, and about 60 percent are borrowers at any one time. Average group sizes are 15-20 members in rural areas and about 45 members in urban areas. The CARE methodology is based upon member-managed savings and credit services. The women self-organize their groups, and decide among themselves how much they will save each week as well as how their savings will be used to make loans to group members. In the CARE/Vision Eritrea groups visited by the Assessment Team, this seemed to generate a strong sense of "ownership" in the group and its activities. Experience with similar methodologies, used in other countries to reach the target group of very vulnerable women, indicates that this cohesiveness and sense of ownership enhances the long term sustainability of the groups as financial services providers.

During the first two credit cycles funds available depend entirely upon the groups savings. After two credit cycles with good on time repayment of loans by members, the group qualifies for a matching contribution from CARE. This is provided in the form of an *external fund* lent at 0 percent and repayable by the group. As of June 30, 2002, five CSCAs had received such funds, including three in Gash Barka and two in North Red Sea. External funds provided ranged in amount from ERN 443 to ERN 5850 ($32 to $433). These matching funds provide vulnerable populations with additional resources but only after they have proven their management capability and in a manner that is not an outright gift.

The CARE program micro-lending activity contrasts with that of ACORD, another local NGO, which uses a similar village based savings and credit association methodology, but is geared toward financing people with existing enterprises. ACORD makes a first loan of N 3500 ($259) to individuals, and then enables them with good loan repayment to "graduate" by formula to loans of up to ERN 10,000 ($740). It serves mixed groups of men (57 percent) and women (43 percent). Under the ACORD model, each loan to a group member is approved on the basis of the decision of a Village Loan Committee, on which a representative of the local administration typically sits.

A1. Strengths of the Methodology

On the basis of numbers alone, a program like that of CARE/VISION and CARE/HABEN may not seem to be having a great deal of impact (560 clients as of August, 2002, in l8 groups, using small amounts of credit). The real impact here is the strength of the methodology used to reach very poor women, who are the key to helping vulnerable households reach income security – and ultimately, food security in the event of a crop failure.

- The group managed scheme seems to "fit well" with the culture, as it has been based upon the informal Equb community savings club.
- It enables women to take ownership of the group and manage the self-financing of their economic activities. This tends to generate greater sustainability for the long run, whether donor support is there or not.

- The methodology builds a basic savings habit among very vulnerable women and their households, in communities where they didn't have financial assets before.
- Having gained some economic empowerment, to the point where they not only earn but control income from an enterprise, they can accept and link their households with other social services (improved child survival, family planning, etc.). These can be delivered to them in groups.

B. Suggestions on Improving the CARE Model

CARE program managers indicate plans to expand the group managed financial services program to other areas of Eritrea and scale them up to reach more women. They have also given consideration with their local partners to setting up an *Apex Facility* for cross-funding autonomous savings and credit groups, perhaps in the form of village banks. In order to look at the broader picture for economic development and how women fit in the larger economy, CARE plans to do subsectoral analyses of specific activities where women are involved and can excel.

The performance of a model like that used in the Community Based Savings and Credit Program could be likely be enhanced with improved performance and impact monitoring:

1. Development and implementation of a Business Plan, with specific annual targets for scaling up the impact of the program in terms of (a) numbers of CSCA members reached with financial services, (b) average loan size, (c) annual portfolio increase (credit growth) and (d) numbers of sub zobas reached with savings and credit services.
2. Development of a baseline study indicating status of program beneficiaries at the beginning of the expansion phase, according to key demographic indicators (e.g., financial/savings assets, productive enterprise assets, key improvements to dwelling, capacity to pay basic school fees) perhaps using livelihood-focused household food economy analysis.
3. Conduct a final impact evaluation, measuring key impacts upon both the borrower's household and the enterprise, with special emphasis upon measures of (a) income security and (b) capacity to produce and/or purchase the household's food requirements.

C. Economic Opportunities for Mainstreaming Women Entrepreneurs

Along with its savings and credit program, CARE has been offering business development (advisory) services to women in their groups, providing training in setting up a microenterprise, simple accounting and funds management. Building on this experience, CARE is looking at opportunities to help women expand and strengthen subsectoral activities in agriculture – in areas where they want to invest and can contribute to economic growth. Potential opportunities include:

- Poultry (5 villages where CARE is lending are now participating in the DANIDA/MoA established poultry training program)
- Animal fattening for feast days (beginning with goat raising which women have started themselves)
- Dairy and cow raising

This kind of market activity carries the potential for linking women's income generating activities to providers of inputs and vital technical services, and eventually helping to "mainstream" women in the larger economy.

D. Options for the Design and Implementation of Microenterprise Activities

The Microenterprise Development (MED) Office recently issued the Accelerated Microenterprise Advancement Project (AMAP) IQC which provides a mechanism to "design, implement, evaluate and coordinate the delivery of creative, state-of-the art microfinance and business development services". To use this option, the USAID/Eritrea would primarily need to prepare a task order request in collaboration with the MED Office. The task order would be competed among the several consortiums which won awards under AMAP and the Mission would choose the response that best fit its requirements. The AMAP IQC provides a relatively low-cost mechanism by which USAID/Eritrea can access proven expertise on microenterprise for implementation of various tasks throughout the project cycle.

The potential constraint to the use of the AMAP IQC is the requirement in Eritrea that field activities be implemented by a local NGO. The consortiums which have been awarded the AMAP IQC can arrange to work with an Eritrean NGO to implement field activities. However, unless these consortiums include one of the international NGOs operating in Eritrea, they are unlikely to have an established relationship with any of the limited number of Eritrean NGOs available to implement field activities.

The alternative would be for the Eritrea Mission to issue it own RFP or RFA for implementation of a microenterprise activity. The advantage of this approach is that it would be easier to target international NGOs that are already operating in Eritrea and may have an established relationship with an Eritrean NGO that could implement the field activities. The Eritrean NGO would likely be included in the partnership identified as responding to the RFP/RFA and therefore USAID Eritrea could evaluate the capacity of the local NGO as well as the international partner(s). Several international NGOs have ongoing activities in Eritrea and these organizations could potentially expand the scope of their existing activities to include a microenterprise component. Even if this alternative were chosen for project implementation, the MED and AMAP IQC could likely provide resources for the design, evaluation, training or other desired complementary activities.

E. Microenterprise Findings and Conclusions

1. The real impact of the CARE/VISION/HABEN (CARE) microenterprise activity is the strength of the methodology used to reach very poor women, who are the key to helping vulnerable households increase incomes and improve food security.
2. CARE microfinance loans are smaller than those of other microfinance lenders, averaging only about ERN 1000 or $74.
3. The CARE microfinance methodology is based on groups self-organizing and making their own decisions on how much to save, how savings will be used, loan terms, etc. This approach results in cohesiveness and a strong sense of ownership that enhances the long term sustainability of the groups as financial services providers.

4. CARE is well on its way to achieving its numerical targets and repayment rates using this methodology are about 98 percent.
5. The primary objectives of microenterprise grant support should be to:

    - Expand services to reach more poor women and vulnerable households with the means to achieve income and food security;
    - Establish an increased number of self managed savings and credit associations (CSCAs) as vehicle for extending and managing grassroots financial services; and
    - Strengthen the capacity of local implementing NGOS, so that they can continue to reach the very poor and provide services to other organizations in establishing and running a similar, tested model.

6. Microfinance intermediaries often require 6-8 years of support to achieve operational sustainability.
7. Activities in targeted subsectors offer the potential for linking women's income generating activities to providers of inputs and vital technical services, and eventually helping to "mainstream" women in the larger economy.

F. Microenterprise Recommendations

1. USAID/ Eritrea should expand microenterprise activities similar to the Community Based Savings and Credit Association Project.
2. Microenterprise activities should continue to target vulnerable populations.
3. The microenterprise activities should be accompanied by and used as a mechanism to diffuse health, nutrition, family planning and HIV/AIDS messages to rural women and incorporate the participation of MoA home economy agents when practical.
4. Grant funding should be made available for expansion and consolidation of this approach to extend basic financial services to the target vulnerable household group for a period of up to five years. This would allow the initiative to scale up to reasonable annual growth rates, reach many more beneficiaries with services and achieve operating sustainability.
5. USAID/Eritrea and grant recipients should agree on target values for the following indicators:

    - Numbers of poor clients reached;
    - Numbers of CSCAs in place and functioning to extend financial services to members;
    - Amount of savings mobilized;
    - Amount and number of outstanding loans;
    - Annual growth rate in outstanding loans; and
    - Incremental annual targets for achieving operational sustainability and financial sustainability.

6. Grant support should be extended to a qualified PVO/NGO partnership to cover basic staff, equipment and technical costs of extending the model in the field. In addition, grant support should be provided to the PVO/NGO partnership to do the following:

- Formalize established savings and credit associations (CSCAs) into village banks;
- Develop a framework for linking such autonomous, self managed village banks in a Federation which could in a later phase be served by an Apex Facility;
- Design the Apex Facility to mobilize excess savings capital from within the system and channel these funds to deficit areas in order to meet effective credit demand among poor households.

7. Care should be taken to link microenterprise participants in subsectors targeted for enterprise development initiatives to those subsector activities.

SECTION VII

Eritrean Public Sector Food Security Management

Food security is a very difficult problem in Eritrea. On average, Eritrea produces only about 40 percent of its basic food needs, and the value of Eritrean exports covers only a small portion of the total value of imports. With both agricultural production and export earnings prospects severely constrained, Eritrea will be dependent on food aid for the foreseeable future.

Although there are a number of constraints to domestic food production, the primary constraint is lack of water. More than 99 percent of Eritrea is classified as arid or semi-arid. Even in the semi-arid areas, rainfall is highly variable and often inadequate for rainfed agriculture to be productive. Eritrea faces perhaps as many as 3 or 4 years out of 10, when rainfed agricultural production may fail. Given this high level of risk, for all practical purposes, farmers can not afford to invest in agricultural intensification in the absence of improved water management; thus rainfed agriculture remains extensive and yields remain relatively low. In years of low rainfall, even fertilizer may burn the crop rather than having its expected positive impact on productivity. Water harvesting and water conservation techniques or other aspects of dryland farming systems may reduce the risk of crop failure directly, as well helping ensure that other technologies such as the use of fertilizer do increase productivity. For all of these reasons, improving water management would appear to be the key to improving food production and the productivity of rainfed agriculture in Eritrea. The high risk and low reward (involving both low productivity and moderate prices), are strong disincentives to investment in rainfed agriculture by commercial enterprises.

The commercial farms observed by the Assessment Team were all using irrigation to some degree. However, on the large commercial farms in the Southwest, irrigated land is often only a relatively small portion of the farms' total land area. Irrigated land is largely reserved for high-value crops such as citrus, banana, cotton, alfalfa, or various vegetable crops. While these same farms often produce cereals, they typically do so using lower-risk extensive methods on land that is not irrigated. Given that the GOE usually manages to maintain modest cereal prices even in years of drought, specialty crops remain a more profitable use for higher-cost irrigated land than cereals.

Land use studies indicate that Eritrea has considerable arable land that is not presently cultivated (potentially 1.0 to 1.6 million ha), but without improved water management, agricultural production on this land remains constrained by high risk and low productivity. Eritrea has only a single river that flows all year, and the national water assessment has not been completed. However, it seems unlikely that there is sufficient water for sustainable wide-spread irrigation of basic food crops. In addition, the prices of cereal crops are insufficient to allow farmers to profitably use irrigation for the production of those crops.

Water availability and improving water management appear to be the key issues with regard to increased food production and food security in Eritrea. However, USAID/Eritrea is not likely to have sufficient resources to undertake a major program addressing the water issues, particularly

given its existing commitment to enterprise development and microenterprise. It might consider a pilot project to exploit the knowledge of sustainable groundwater sources developed by an American company in reaction to the Ethiopian drought and famine in the 1980s.

At present, USAID is involved in the public sector food security management area primarily through the donation of food aid and support for regional and national level Famine Early Warning Systems activities. Another area critical to increasing food production and food security in Eritrea is the liberalization of cereal prices. This is an area in which USAID has extensive experience. For a relatively modest investment, it can make a significant contribution to capacity building and policy analysis at the Grain Board. Another area where USAID can expect significant impact for a modest investment is in helping address the striga issue. The INSORMIL CRSP has striga resistant cultivars that can be used to breed striga resistant varieties. These highly desirable varieties might also provide a means for involving the private sector in seed production.

A. Overview of Agricultural Production

Eritrea's natural landscape ranges from densely populated semi-arid highlands to arid coastal lowlands. With the exception of a tiny area constituting less than 1 percent of Eritrea's 12,189,000 ha land area; the consistent factor is limited rainfall. Approximately 1,500,000 ha (or 12 percent) are considered to be suitable for rainfed agriculture and another 600,000 ha (or 5 percent) may be arable if they can be irrigated, giving a total of 2.1 million ha (FAO, 94). Almost all of the rainfed agriculture is in semi-arid zones, both in the Central Highland and Southwest Lowland agroecological zones. Traditional rainfed agriculture accounts for nearly 90 percent of the estimated average of 400,000 ha cropped annually on farms averaging less than 1 ha in the highlands and 2 ha in the lowlands. Only about 30,000 ha of land are irrigated, most of it supplementary spate irrigation for sorghum grown on the escarpments.

In 2000, Eritrea was estimated to have a population of 4.1 million with a per capita income of US $170, less than 40 percent of the average for Low-Income Countries and 35 percent of the average for Sub-Saharan Africa. Eighty percent of the population is classified as rural and thus in most cases at least partially dependent on agriculture for income, yet 60 percent of the population is said to depend on agriculture for employment and agriculture was only 17 percent of GDP in 1999. While infant mortality (at 61 per 1000 live births) is lower, illiteracy, life expectancy, child malnutrition and access to improve water sources compare poorly with the averages for Sub-Saharan and Low-Income Countries (http://www.worldbank.org/afr/er2.htm).

Rainfall on average ranges from 500-700 mm but is highly variable in both quantity and distribution in the semi-arid zones, which are in effect Eritrea's higher rainfall and higher potential areas for agriculture. Rainfed agriculture is risky under these circumstances. If the rains start a couple weeks late, end a couple of weeks early, or there is a two week drought at the crops flowering stage, it is likely to seriously compromise the production of even relatively drought tolerant crops like sorghum, which constitutes nearly half of Eritrea's cereal production. Cereal yields average about 600 kgs/ha, pulse and oilcrop yields average 400 and 500 kgs/ha. In 1999, the best year on record, Eritrea produced 472,000 tons of cereals, pulses and oilseeds combined, or about 75 percent of its total food needs. However, the average combined cereal, pulse and oilseed production for 1992-99, is 238,000 T, or about ½ of the amount produced in 1999.

During this period Eritrea produced on average about 40 percent of its basic food requirements. Eritrea has a structural food deficit and will need to import or receive food aid to cover 25 percent to as much as 75 percent of its basic food requirements for the foreseeable future.

Highland areas grow predominantly barley, wheat, sorghum, maize, pulses (chickpeas, faba beans and lentils) and oilseeds (linseed, sesame and groundnut). Farmers use oxen for land preparation and threshing and most families keep small ruminants. Population densities are very high and average farm size is less than one hectare. Communities maintain common grazing areas for livestock, but these are often insufficient and animals may move seasonally to the lowlands in search of grazing. The area has been almost completely deforested and fuelwood sources are scarce. Animal manure is collected and used as a source of fuel, leaving little to be used to improve soil fertility. Relief, limited vegetation and water runoff on steep slopes contribute to soil erosion and land degradation. Terracing and other soil conservation measures are of a primary importance.

The Coastal Plains are arid zones with rainfall below 500 mm. A little sorghum or millet may be grown in wadis with irrigation or residual moisture, but most of the agricultural activities consist largely of semi-nomadic animal rearing. An exception is a portion of the Eastern Lowlands, where runoff from the highlands provides the potential for supplementary (spate) irrigation of sorghum, maize and millet.

The Southwestern Lowlands grow sorghum, millet, maize, cotton, sesame, and sunflower. The terrain is relatively flat and there are fairly large areas with good soils, including black cotton soils. Traditionally, much of the population is agro-pastoral, practicing short seasonal transhumance, or nomadic, making large transhumant movements. Average per capita income among semi-nomadic herders is estimated at about $100 a year. Herds consist of cattle, camels, sheep and goats. These systems contrast with those of sedentary farmers that practice integrated crop and livestock production. In recent years there has been a distribution of land to large-scale commercial farm concessions, ex-fighters and displaced persons returning from Sudan. While there is a significant amount of land available for cultivation if one ignores the claims of the nomadic and semi-nomadic pastoralists, the area has a short growing season and both limited and highly variable rainfall.

Some Eritreans argue that the government should stop trying to cultivate enough cereal and food crops to feed the population and use the land for what it has traditionally been used, raising livestock. The semi-arid, and in season even the arid, lands produce adequate pasture for raising large numbers of livestock, which could be exported to allow cereal imports. If enclosures, rotational pastures and other modern livestock production methods were used, then livestock production could be significantly increased and might rival the value of the food crops and would be more sustainable because it capitalizes on the productivity of the natural ecosystems. While this idea is intriguing, it doesn't seem to have worked much of anywhere in Africa. Modern livestock production methods tend to break down when relatives arrive with starving livestock, because there is a drought, flood or other crisis in their production areas. Nomadic and transhumant systems tend to break down because with increasing population density, farmers settle and cultivate most of the river valleys, wadis and other lowland or high rainfall highland areas that might provide a dry season refuge for the herds. When a large-scale drought or other

crisis hits, much of the national or regional herd may be lost and it takes years to rebuild the animal population to levels that might support a desirable standard of living for the population. When such an event occurs, many families are left devastated and destitute. At least with annual food crops, production can bounce back the following year or rainy season if seed and the means of production are available.

With the Ethiopian invasion in 2000, one million Eritreans were displaced from the Gash Barka and Debub Zobas, the two zobas that produce 70 percent of the food crops. While most people have returned to their homes, land mines prevent or render farming activities very dangerous in some of the more productive agricultural areas. Towns and farms were badly damaged by the "scorched earth" practices of the Ethiopian army. Any animals, equipment or inventories not removed by the residents were taken by the Ethiopian Army. The ERCS program has helped to replace a portion of the equipment, animals and inventories to get farms and urban businesses back in operation.

B. Irrigation

One strategy for increase agricultural production is a focus on increasing the use of irrigation. Eritrea has only a single river that flows the entire year. However, some of the rivers carry very large volumes of water after a significant rain and run more or less constantly during the rainy season. Spate irrigation, which accounts for most of the 30,000 ha of irrigated land, channels some of that volume onto farmers' fields as supplemental irrigation. Farmers have only limited control but can hope to ensure enough additional water to carry crops through a two week drought during the rainy season or allow the crops to reach maturity even if the rains stop a couple of weeks early. There has also been a major effort to build dams to help retain water, use some for irrigation and livestock, and help rejuvenate groundwater reserves. While there is an important potential for retaining water in small dams for use in watering livestock and increasing water levels in local wells, depending on design and location, many of the dams built have provided only limited potential for actual irrigation.

Also building a dam, diverting a substantial amount of water from a river, or digging boreholes and equipping them with pumps requires a substantial investment and increases costs of production. In many cases it may not be profitable to invest in such infrastructure for relatively low value crops like cereals. Typically, where such investments are being made, farmers are trying to use all or at least a portion of the water to maintain high-value and/or perennial crops like citrus, bananas, alfalfa, cotton, onions, tomatoes and other vegetables and fruits. These high-value crops help diversify and stabilize farm incomes in the face of climatic variability and help pay their loans so that they can remain in business. Most of the products contribute directly to local or national food security, help diversify food products and improve nutrition, or contribute indirectly by the income and possibly foreign exchange that they generate.

Rainfed agricultural production is risky in the Gash Barka area. The Assessment Team visiting the last week of August (nearing the end of the normal rainy season) found much of the sorghum only a foot high and nearly dead from lack of moisture. Large farm concessions often have several hundred (and in a few cases, thousands of) hectares of rainfed sorghum and occasionally some millet. These concessions also often have 100 to 200 ha of irrigated horticultural crops, onions, tomatoes, okra, bananas, citrus, etc. to diversify income sources and help offset the risks

related to rainfed agriculture. In most cases, it is difficult for small (2 ha) farms to access irrigation water and diversify in this manner. Small farms are more likely to diversify by having some family members seek off-farm employment in town, on agricultural concessions, or through self-employment in trade, crafts or service activities.

While historically very little of the land has been irrigated, there appears to be strong competition among the large farms to capture water from local rivers (Gash) or build dams in some of the few locations where larger dams (typically 2-30 million m3, but as large as 150 million m3) can be built on a broad plain with relatively little relief. They would like to irrigate a larger portion, if not their entire land area, and they seem to have realized that there will not be enough water to irrigate all of the land available. By relying largely on gravity flow and open earthen irrigation ditches, they are gaining access to water with a minimum investment. These irrigation systems are not very efficient and if the water has to be moved some distance to the fields, as much as 50 percent may be lost before it arrives. Use of these inefficient irrigation systems will have important implications for how much land can eventually be irrigated with the water available. However, it is not in the interest of farms strapped for capital to worry about how many hectares can eventually be irrigated, but rather about how many of their hectares can be irrigated now and at what cost. This is a case where given the present constraints and incentives, good enterprise management results in behavior that is not in the best long-run interests of society. If there was a fee for each unit of water used, farms might have an incentive to minimize water loss and use.

More efficient water-conserving irrigation equipment such as sprinkler and drip irrigation systems are known but are generally not available locally. The gravity flow ditch irrigation systems using earthen ditches to move the water are very wasteful; water infiltration and evaporation may cause a significant percentage of the water to be lost before it ever gets to the fields. The Assessment Team visited several farms between Asmara and Massawa that had Israeli drip irrigation systems covering large fields, but only appeared to be in use for a handful of ha of citrus and other fruits. Since a number of the fruit trees appeared to be dead or nearly so, it seemed that these expense installations, at least in part on government farms, were not being used effectively. It probably is not practical to establish drip or sprinkler irrigation systems to grow sorghum, but then single crops should not be grown year after year on the same land without rotation or fallow. If farming systems are promoted that alternate between cash and food crops, then perhaps the cash crop can support the expense of the irrigation system, and the irrigation along with improved fertility and crop management practices may also lead to a several fold increase in food crop yields.

Fields that are cleared and leveled for irrigation, have ditch and dike structures that help retain natural rainfall and any fertilizer used, as well as facilitate irrigation. One does not observe the use of contour dikes or contour cultivation practices such as alternating contours of grass or hay cover crops with row crops. To date there has been only very limited testing of other water harvesting techniques, for example the use of tied ridging. Minimum tillage practices appear to be untested and unknown.

The desire to use of gravity flow ditch irrigation and large machinery has caused many of these large farms to level large blocks of their land, clearing it completely of any trees, bushes or other natural vegetative cover. On the large commercial farm concessions that can amount to hundreds

or thousands of hectares of land stripped bare. Logic and the observation of harmattan like conditions would seem to indicate that this practice may greatly increase the loss of soil due to wind erosion. It also seems to repeat the types of practices that helped turn the once highly productive Senegal Peanut Basin into a near desert or caused the "dust bowl" conditions in Oklahoma and other parts of the Western US.

Even the farmers are worried by the fact that the Gash River seems to carry away a meter or more of land from the banks along their farms each year. While if true, this is probably due to large and perhaps increasing volumes of water caused by vegetation loss and soil disturbance and degradation higher in the watershed. It seems likely that completely clearing large tracts of land may also contribute to the problem for those further downstream. If pressurized irrigation systems like drip and sprinkler systems were used, it also would not be necessary to level the land to the same degree and some of the land clearing and large-scale soil disturbance might be avoided. However, clearing and leveling land also appear to be important criteria for persuading the land authority or the bank that one has invested in and improved the farm when seeking to retain usufruct rights or a loan.

In addition to USAID/Eritrea's involvement in spate irrigation, there may be an opportunity for the Mission to support a pilot water development activity based on unique knowledge of groundwater resources. In reaction to the Ethiopian drought in the 1980s, the head of OFDA, Andrew Natsios, requested the analysis of water resources in Ethiopia, including Eritrea, using unique geological siting techniques developed in the oil industry. The original maps produced in 1992, identify high-output rechargeable aquifers. This mapping may provide an alternative basis for water development activities to help reduce the impact of the present drought. The resources identified can potentially be used for human and livestock consumption and irrigation.

C. Increased Use of Agricultural Inputs and Mechanization

Since the mid-1990s, the government has pushed hard to increase the production of basic food staples, both by expanding the land area under cultivation and increasing yields. Agricultural statistics indicate that only about 400,000 ha are now cropped annually, indicating that there should be another 1.1 million ha of arable land where rainfed crops could be cultivated (ignoring fallow and the land rights of herders). Much of this land is in Gash Barka and is being allocated by the government in small 2 ha allotments to 1) families displaced by the war with Ethiopia and 2) families of ex-fighters; and in large blocks to large commercial farm concessions, usually 50 ha to 300 ha, but in a few cases consisting of 5000, 16,000 and even 60,000 ha blocks. Labor is in very short supply given the mobilization of most men and many women of military age. The government has introduced large mechanization programs to try to help farmers address this labor shortage. In addition, Eritrea has attempted to raise crop yields by increasing input levels and introducing new varieties of food crops. Varietal work has focused on more drought resistant varieties of sorghum and millet which are grown in the lowlands where expansion of cultivated land area is possible, and to a lesser extent on barley and wheat varieties for the highlands. Land preparation with tractors is said to increase yields relative to land preparation using manual means or animal traction, perhaps due to improved tillage and water infiltration, or perhaps because it can be accomplished more quickly and allows more timely planting. Mechanization, inorganic fertilizer and seeds have been heavily subsidized in this attempt to raise production. Eritrea managed to substantially increase production of cereals, pulses and oilseeds in 1998 and

1999 to a level approximately double the average production for 1992-99. However, the Ethiopian invasion of the two zobas that produce 70 percent of the food crops led to a sharp decline in food production in 2000. The destruction of equipment and infrastructure, loss of labor to the military, and other war related problems in addition to rainfall have prevented food production from returning to 1998-99 levels.

The increase use of fertilizers is primarily facilitated by their promotion and subsidization under three pilot programs intended to intensify production in smallholder agriculture, the Special Programme for Food Security (SPFS), the SG 2000 and the Integrated Farming Systems (IFS) project. The SPFS initiated participatory on-farm demonstrations of simple crop husbandry practices in both the highlands and lowlands. SG 2000 operates primarily in the highlands and distributes improved seed, fertilizer and pesticides for use on 0.5 ha plots, to select smallholders using hand labor or oxen power and provides extension services targeting farm management. The IFS operates in both the Southern Highlands and in the Southwestern Lowlands, but the focus is on field production rather than demonstration plots. In addition to SG 2000 technologies, it promotes the use of tractor mechanization and organization of smallholder farms into larger units that can effectively use motorized equipment which the government provides at subsidized rates. Both SG 2000 and IFS promote intensified production of basic food crops through technology transfer and strengthening national extension services, offer seeds as well as subsidized nitrogen (Urea) and phosphates (DAP). Statistical data are not very reliable and the results indicating substantial increases in cereal yields appear to be heavily influenced by years of better rainfall. The 100 percent increases in sorghum, millet and wheat yields, and 30 to 50 percent increases in barley yields may be an indication of what can be attained if improved seeds, fertilizer, pesticides and improved cultivation are combined with water harvesting, but are not likely to be achieved without also improving water management.

One of the results of these efforts is that use of agricultural inputs has expanded rapidly and now exceeds the capacity of the Ministry of Agriculture to deliver the inputs. Extension agents in these programs reportedly are so busy handling the delivery of inputs that they no longer have time to do extension work. Undoubtedly, like every other program, they have lost an important portion of their agents to the military mobilization, and programs in target areas have undoubtedly been disturbed by the May 2000 invasion. While the government would like to privatize the delivery of agricultural inputs, the private sector has little capacity to take over the responsibility for these functions in the near future.

D. Striga

Almost ½ of the total cereal area cultivated is planted to sorghum. It is the most important staple because it is reasonably drought tolerant and makes a tolerable substitute for taff (teff) in making enjera. Its importance is likely to increase, given the present emphasis on expanding the area under cultivation in the Gash Barka lowlands, where sorghum is the principle crop.

One of the greatest constraints to sorghum production in addition to drought and labor shortages is the parasitic weed called striga. A single striga plant produces thousands of seeds that can remain dormant in the soil for as much as 20 or 30 years until they come in contact with a potential host plant. The striga attaches to the sorghum plant's root system, taking its nutrients from the sorghum plant, often to the point that the sorghum plant does not produce grain. Certain

cultivation practices, particularly improving soil fertility, and especially the use of nitrogen, can also help to control the effects of striga. Crop rotations or intercropping can also help, particularly when nitrogen producing legumes are used. A few crops like cotton also serve as trap crops and cause the striga to germinate, but the striga is unable to attach to cotton plants and the germinated seeds wither and die.

Purdue University and the INSORMIL CRSP have produced some sorghum cultivars that are resistant to striga. The use of these cultivars in breeding programs raises the prospect of being able to develop, over time, local varieties that incorporate this resistance and help limit yield losses due to this weed. Once striga resistant varieties are developed, there might be a strong rational to get involved in the multiplication of seed of those resistant varieties for distribution to farmers (see below), as well as providing a highly targeted extension effort, perhaps through private sector seed producers, to disseminate the seed and encourage farmers to try them.

Millet (pearl) is potentially more drought resistant than sorghum, and Eritrean millet varieties are reported to be highly striga resistant. From the production side, this would seem to imply a strong rational for increasing millet production. However, millet is apparently not as good a substitute as sorghum in making enjera, and therefore there is a very limited market for millet. This might be one area in which a focused post-harvest activity to identify millet varieties and processing techniques that result in acceptable enjera produced from millet might open a major market. Opening that market, might allow millet to make a much larger contribution to the economy and to food security in Eritrea.

Given the importance of the striga problem in sorghum and the capacity of the INSORMIL CRSP to help resolve this problem, there seems to be a compelling argument for USAID to fund that work. Given the withdrawal of DANIDA support to the MoA, it would also seem appropriate for USAID to consider funding the continuation of modest ICRISAT and ICARDA activities, and Eritrean participation in the AZARECA network agricultural research activities.

E. Seeds

The MoA is also the primary supplier of agricultural seeds. Even with DANIDA support for the seed program, the demand for seed exceeds the ministry's supply capacity. The MoA has a stated policy of trying to privatize the supply of agricultural inputs, although the private sector has little capacity and shows little interest in taking on the task. Seed multiplication, and particularly the multiplication of highly desirable striga resistant sorghum seed, might provide an interesting target to test the potential for getting the private sector involved in the supply of agricultural inputs. It might be developed in a manner very similar to, or even as part of the subsector initiatives in the enterprise development component. It would require negotiation with, and agreement by the MoA to restrict their production of striga resistant seed to the supply of foundation seed for multiplication by private firms/farms. It is unlikely that the MoA will be able to meet farmers' demands for striga resistant sorghum seed. However, the private sector is unlikely to invest in building the capacity to multiply and distribute the seed if it must compete with subsidized government activities, or if it fears that seed prices will be set administratively at unprofitably low levels.

F. Ministry of Agriculture (MoA)

The MoA is in the process of redefining its entire extension and research strategy that continues to be heavily focused on increasing food security by: a) promoting more sustainable rainfed yields and b) increasing the diversity of farm revenues through the development of small-and large-scale irrigation (Sanders and McMillan, 2001). It had expected to receive technical assistance and financial help from DANIDA for this effort, but for domestic political reasons, the Danes have withdrawn their embassy and support to Eritrea, cutting the budget of the MoA by about 40 percent. One of the organizational anomalies is that there is no separate structure for the extension service. It exists as a unit of the crop production and crop protection division within the Land Resources and Crop Production Department. In this institutional setting it has a rather limited mandate, for example, it does not deal with livestock. Efforts have begun to reorganize the extension services under the Farmer's Advisory Services pilot project with support from FAO and DANIDA. There is also a major decentralization effort taking place and it appears that some of the functions of the MoA will be delegated to the zobas and sub-zobas, but it is still unclear how this will take place. While the MoA provides very limited operational funding to the field offices, it is not clear that the zobas and sub-zobas will be able to provide even that limited means.

The (agricultural) Research Division is located in the Research and Human Resource Development Department. It is being restructured with 3 major research stations, the main station, Halhale, in the Highlands; Shambuko in the Southwestern Lowlands; and Sheib in the Eastern Lowlands. Each station has several sub-stations in surrounding areas. There is recognition that research activities need to get off-station into farmers' fields and incorporate farmers into the priority setting for research activities. The Research Division complains that to a large degree it lacks the personnel and resources to implement those objectives. Agricultural research receives continuing supported from FAO and the Republic of Italy, but has been heavily supported by DANIDA as well.

As part of the effort to privatize agricultural input delivery, the government seems intent on privatizing the mechanization program. It has reportedly conferred more than 100 tractors to farmers or coops, but with little analysis of the capacity of these beneficiaries to maintain the operations and purchase the equipment. The MoA has few if any economists on its staff and it would be interesting target of opportunity to offer technical assistance to provide training and build capacity to do this type of analysis. Cultural restrictions (among most ethnic groups) make it difficult for women to plow or do land preparation activities, placing a severe constraint on female headed households. Access to mechanization services would be one way to overcome this constraint. It would be interesting to test the possibility of economically empowering rural women by facilitating access to mechanization services. This might be a profitable and mutually beneficial target for private sector mechanization activities, or organized through producer associations and local women's groups.

Privatization of other large farms, like the 16,000 ha Alighidir cotton farm is also problematic. At one point it appeared that such large farms would be distributed to ex-fighters, either in their entirety or partially so that the large farm could serve as a base around which an outgrower scheme would be organized. As such, the large farms would serve as a means of marketing crops or produce for smallholders as well as supplying agricultural inputs and extension services. This

plan seemed logical when these were government farms, but it is less clear that a private investor would be interested and willing to buy into these responsibilities. But the war destroyed the infrastructure of many of these farms and the government is looking for help from the private sector to rebuild. The need to attract private investment is potentially a constraint to the development of this outgrower model as a major initiative in providing agricultural inputs and extension services. With the need to demobilize 200,000 fighters and integrate them back into the economy, there is a real question whether the need for private investment, the desire to give ex-fighters land, or some combination will win out.

There are a number of other constraints to agricultural opportunities due to the role played by the MoA that have been mentioned to the Assessment Team in various interviews:

The MoA controls the importation of fertilizers and other agricultural chemicals. It heavily subsidizes the use of DAP and Urea, but recommends a blanket dose for all crops and all soils. Some crops (for example bananas and alfalfa) have higher potash needs that are not served by this blanket recommendation and restrictive importation controls. Some of the flower producers also mentioned that they need specialized fertilizers and pesticides (for example, fungicides) to be competitive in international export markets.

- Flower producers say that the MoA does not have qualified experts in ornamentals, but they must get the MoA to supply the products they need. While they may identify a problem when it has affected only a square meter or two of their production area, but the time the MoA staff inspects the problem it has affected several hundred square meters, and by the time the appropriate product arrives, it may have affected several thousand square meters or even the entire crop. International flower markets will not accept flowers that have any disease, fungal or pest problems, so the entire crop may be lost. Such losses are a very severe constraint on the viability of ornamental producers.

The assessment team heard similar stories with regard to the poultry subsector. The MoA controls the importation of medications for chickens. It typically keeps a supply of the medication used to treat Newcastle Disease, but that is the only disease for which it does. According to one poultry specialist, there are several other diseases for which poultry need to be treated, but those medications are not available. In some cases, these diseases will also wipe out several hundred or several thousand chickens at a time. Poultry producers have reportedly asked the MoA to make these other medications available, but with no results. Also with regard to poultry production, the MoA poultry specialists seem to only have a single design available for poultry housing, and that design is very expensive to build. Other poultry specialists believe that this design exaggerates the investment required for semi-commercial poultry production, thus limiting entry into semi-commercial poultry production and compromising the profitability of those that do invest. Access to other MoA poultry program benefits are said to be with held if the investor refuses to accept this expensive poultry housing design.

G. Grain Board

The Grain Board is responsible for the importation of commercial wheat and sorghum and concessional food aid and manages a storage capacity around the country equal to about 15

percent of national grain consumption. While it was able to purchase small amounts of domestically produced sorghum during the good production years of 1998-99, most of the grain for its domestic reserves has to be purchased or donated from overseas. The Grain Board has two objectives. The first objective is to facilitate the provision of food to that portion of the population, often a majority, which is unable to produce or purchase enough food to meet their family needs. This may be done by direct delivery of relief food or by the monetization of food aid to fund Food-for-Work or Cash-for-Work activities. A second objective is to stabilize prices within certain limits for that portion of the population that has sufficient income to purchase food supplies, and avoid large swings in price that may be exacerbated by transportation constraints and high marketing costs. However, there is a tendency to favor consumers and keep food prices low even in the face of scarcity, which in turn provides a disincentive for farmers to increase production of those staples whose marketing is controlled or heavily influenced by the Grain Board. There may be an opportunity to provide capacity building support to the Grain Board to help identify appropriate policy and pricing; particularly the recognition that there is less and less need for public interference in grain market pricing as infrastructure is rebuilt and the economy develops. Farmers can not afford to invest in irrigation and water harvesting systems, mechanization, fertilizers, pesticides and other agricultural inputs necessary to expand production if prices are maintained at artificially low levels.

Price stabilization in Eritrea is based largely on the quantities of cereals and basic food commodities imported through commercial and concessional channels. Large quantities of commercial and relief food will be needed for the foreseeable future, and Eritrea's lack of exports and foreign exchange to import adequate quantities of food through commercial channels will make it difficult to truly privatize cereal importation and cereal markets. However, as long as the public sector controls these imports there will likely continue to be a tendency to err on the side of caution, by overestimating the quantities required, and thus keeping prices relatively low.

H. Famine Early Warning Systems (FEWS)

Eritrea has not produced more than 75 percent of its basic food needs in recent memory and averaged producing only about 40 percent of its basic food requirements for much of the 1990s. Given the reliance on commercial and concessional imports of basic staples, the ability to predict harvests, market conditions and food needs is very important. The government has a National Food Information Systems (NFIS) located in the MoA with support from FAO that forecasts weather and crop harvests. The USAID funded FEWS program has attempted to work with and build capacity in the NFIS with somewhat mixed results, particularly with regard to information sharing and transparency of forecast results. In August 2002, the GOE announced a request for 400,000 MT of food aid for the 2002-03 year, or approximately 55 percent of Eritrea's annual basic food needs. Yet the rainy season was still in progress and it is difficult to predict the harvest until after the rains stop. A consensus plan was not achieved among the FEWS and food aid donor community. The failure of the NFIS to achieve this consensus before releasing the food aid request is causing the international FEWS community to question the policies, procedures and accuracy of forecasts disseminated by the NFIS.

The USAID funded FEWS program has the capacity to make an important contribution to harvest forecasts and food need estimates. Close collaboration with the regional mapping and drought monitoring facilities in Nairobi, which now fall under IGAD and are intended to serve

Eritrea in this regional context provide important regional synergies. In most countries, FEWS NET (the latest iteration of FEWS) has facilitated the development of networks that support information sharing and forecasting of harvests and food aid needs that supplement the government's own capacity. It also believes that it can provide information that would help guide decision makers with regards to issues related to poverty alleviation. However, FEWS NET feels that given the lack of information sharing and transparency of forecasts within the NFIS, and the lack of credibility of its recent food aid request, perhaps it would better serve its purpose if it worked independently of the NFIS. It believes that either the USAID office or the Macro-Policy and International Cooperation office might provide an appropriate location independent from the NFIS, where it could continue to make valuable contributions to harvest and famine forecasts, food security strategies and the identification of vulnerable groups based on household food economy analysis.

I. Food Security Findings and Conclusions

1. Although there are a number of constraints to domestic food production, the primary constraint is lack of water. More than 99 percent of Eritrea is classified as arid or semi-arid. Even in the semi-arid areas, rainfall is highly variable and often inadequate for rainfed agriculture to be productive. Eritrea faces perhaps as many as 3 or 4 years out of 10, when rainfed agricultural production may fail. Given this high level of risk, for all practical purposes, farmers can not afford to invest in agricultural intensification in the absence of improved water management. Thus rainfed agriculture remains extensive, yields remain relatively low, and Eritrea produces only about 40 percent of its food needs. For all of these reasons, improving water management would appear to be the key to improving food production and the productivity of rainfed agriculture in Eritrea. The high risk and low reward (involving both low productivity and moderate prices), are strong disincentives to investment in rainfed agriculture by commercial enterprises.
2. Eritrea has a long tradition of nomadic or semi-nomadic animal production and low rainfall ecosystems may be better adapted to producing grass than rainfed crops. However, increasing population densities and farming have typically taken over the higher rainfall areas, and river valleys or lowlands that once served as a dry season refuge for transhumant herders. Without such refuges, the carrying capacity of those low rainfall ecosystems is drastically reduced and the livestock systems prone to disaster.
3. The GOE has attempted to increase food production by increasing the area cultivated and intensifying cropping with increased use of agricultural inputs (seeds, fertilizer, pesticides) and mechanization. The use of agricultural inputs and mechanization has been heavily subsidized by the GOE. These efforts focus primarily on Debub and Gash Barka, areas where 70 percent of the basic food crops are grown. The demand for these subsidized agricultural inputs now reportedly exceeds the delivery capacity of the MoA. The GOE would like to privatize the delivery of agricultural inputs, but given the government subsidies, the private sector has been largely unable to sell such products and has had no reason to build the infrastructure necessary for rural delivery.
4. Most land presently being irrigated is using spate irrigation which channels some of the excess flow of seasonal streams onto the fields to supplement the moisture received from rainfall. As practiced traditionally, this is more of a survival mechanism than an intensification of agricultural production.

5. In the Gash Barka area, there seems to be strong competition among large farm concessions to capture water from the Gash River or control a site where a relatively large dam could be built. There appears to be more relatively good quality land than potential surface water for irrigation. Most irrigated land in Gash Barka is used for relatively high value and/or permanent horticulture crops, cotton and alfalfa. It would appear that water is too scarce and the cost of irrigation too high to regularly irrigate large quantities of basic food crops, although basic food crops may be part of a rotation. Most of the irrigation observed in Gash Barka is using open earthen ditches and gravity flow with the source being water pumped from the river, a weir on the river, or a dam. This is the cheapest way to irrigate, but also the most wasteful of the water resources. When water is moved several kilometers, these systems may lose as much water as they deliver to the field. This is good enterprise management, but questionable public policy. Eritrea is likely to run out of water for irrigation while there is still plenty of good land that could be irrigated.
6. Given the tendency toward continuous cultivation of sorghum, the dominant cereal crop, striga infestations are affecting ever larger areas. Appropriate cultural practices can help control striga, but there is a great need for striga resistant varieties. The INSORMIL CRSP has developed striga resistant cultivars that have helped breeding programs in other Sahelian countries develop locally adapted striga resistant varieties.
7. The MoA is in the process of revising its agricultural research and extension strategy to help achieve food security. Given limited staff and resources, the MoA appears to be open to innovative and alternative approaches to agricultural research and extension. One alternative extension strategy considered is the use of smallholder outgrower schemes in conjunction with large GOE-owned farm concessions, in which the large farm concession would provide cash crop marketing, input delivery and extension services. If the concessions are privatized, it is not clear whether or under what conditions the private sector might provide these services. It also is unclear if such concessions will be privatized or if the land will be allocated as smallholdings to a large number of ex-fighters. While USAID/Eritrea may not be in a position to underwrite the national agricultural research and extension programs, it may use alternative strategies to provide specific agricultural research and extension services in initiatives for selected subsectors.
8. The MoA is the primary source of seeds for planting crops, but demand reportedly exceeds its supply capacity. The private sector has helped meet this need in other countries and could in Eritrea if the government can reach some accommodation with the private sector that allows them to earn a profit growing seeds.
9. The Grain Board is trying to regulate and manage food stocks to feed a population with a large structural deficit and stabilize prices for those who may be able to purchase grain. Price stabilization (usually at a low level to help consumers) typically is contradictory to and impedes efforts to increase food production and make more food available at reasonable prices in the long run. Price stabilization often requires heavy subsidization and uses funding that might be used more effectively in other ways to improve food security.
10. Famine Early Warning Systems activities can make an important contribution to food security in Eritrea. However, FEWS NET management is very concerned about the lack of information sharing, transparency and consensus of forecasts emanating from the

NFIS. The recent NFIS request for food aid is said to lack credibility. FEWS NET is rethinking its close involvement with the NFIS under these circumstances, and believes that it has an obligation to provide a transparent and therefore credible analysis of harvest prospects and probably food aid needs.

I. Recommendations

There are many areas in which Eritrean public sector food security management would benefit from USAID support. Strategically, the two areas with the potential to have the greatest impact are improved water management and increased liberalization of cereal markets. The Assessment Team believes that there is great need for improved water management in both irrigated and rainfed agriculture. However, the Assessment Team also recognizes that USAID/Eritrea may not have sufficient resources to open another major program area in addition to its commitment to enterprise development and microenterprise activities. Therefore, many of the recommendations are focused on areas that are of secondary importance strategically, but areas in which USAID has proven experience and comparative advantage.

1. Provide capacity building and technical assistance to the Grain Board, to move toward greater liberalization of cereal markets and improve its effectiveness in addressing the contradiction between grain price stabilization policies and policies to improve incentives for farmers to increase cereal production.
2. Continue support to FEWSNET and its relationship with regional mapping and famine monitoring services of IGAD to help forecast harvest results and food needs in Eritrea in a manner that is both transparent and consensual. Given concerns for the lack of information sharing and transparent forecasts at NFIS, USAID/Eritrea should consider allowing FEWS NET to establish an office independent of the NFIS.
3. Long-term efforts to reduce the risks of rainfed agriculture and soil erosion under semi-arid (dryland farming) conditions should be supported, in particular, efforts to expand water harvesting, water conservation and spate irrigation and also efforts to protect against wind erosion. Consider funding support to the Eritrean agricultural research system by ICRISAT and ICARDA and participation of Eritrea's NARS in ASARECA's regional networks to help provide access to needed technologies. Other forms of irrigation should be supported in the context of producing high-value products that can pay for the irrigation infrastructure. Where and if feasible, the use of water conserving irrigation technologies should be encouraged.
4. USAID/Eritrea should facilitate making available the results of mapping groundwater resources funded by OFDA which identify high-output rechargeable aquifers. Pilot activities to develop these resources might make a key contribution to emergency drought relief efforts.
5. Support the development of striga resistant sorghum varieties as a target of opportunity that takes advantage of the capacity developed by Purdue University and the INSORMIL CRSP. Leverage the expected popularity of these striga resistant sorghum varieties by entering into negotiations with the MoA to facilitate the development of a private sector seed production industry, based on the multiplication of these varieties.
6. Consider working with the GOE to pass regulations on pesticides and agricultural chemicals and facilitate a deliberate liberalization of MoA controls on specialty fertilizers and pesticides.

7. Consider providing technical assistance to help the MoA provide training and build capacity to analyze private sector capacity to maintain operations and purchase government owned mechanization assets and large commercial farm assets.

SECTION VIII

Cross–Cutting Issues

A. Food Security

The three programming clusters identified as potential intermediate results for a future USAID Economic Growth and Food Security SO will not solve the food security problem in Eritrea. However, all three will address different aspects of food security, help initiate activities that will move toward a solution of the food security in the long run, and help people, especially vulnerable populations, cope with the food security problem in the short- and medium-term.

A1. Enterprise Development Cluster

The Enterprise Development activities contribute to the long-term development of food security by increasing the production of food goods for domestic consumption as well as by trying to position certain subsectors to contribute to export earnings. Any increase in agricultural production will increase food availability. Initially the focus will be on improving the production and functioning of the poultry and horticultural subsectors. The poultry subsector helps supplement the incomes of 10,000 rural households in addition to providing additional protein for children and family members. But the present production and marketing is still not sufficient to keep down prices and help increase access to meat and egg protein for urban populations. Improving the functioning of the poultry subsector will target increasing incomes and nutrition (utilization) of rural households as well as increasing the supply of meat and eggs and lowering the price to urban populations. The immediate focus of improving the functioning of the horticultural subsector will be to increase the availability of fruits and vegetables in domestic markets, increasing household options to improve nutrition. A small number of horticultural producers targeting high-quality products for high-income market segments may gain the experience necessary to compete in export markets in the future. Exports provide the foreign exchange necessary to import basic food goods and equipment to further expand the private sector economy and income earning opportunities. Given the high risks involved in rainfed agriculture, diversification is critical to improving rural household income and to keeping commercial farms economically viable. Higher value products such as irrigated horticultural crops and livestock provide important opportunities for increased income and diversification.

One of the intentions of the enterprise development activities is to offer employment opportunities through commercial agricultural production and processing activities which in turn provide income and access to food. Another is to help integrate rural households into the commercial economy, and thus increase income generating opportunities and household incomes. However, it is recognized that even success at this endeavor may not meet many of the needs of poor and vulnerable populations. The microenterprise activities will help address some of those needs.

A2. The Microenterprise Cluster

Although most Eritrean households are rural-based and at least somewhat dependent upon agriculture, most households in Eritrea do not produce enough food to last the entire year. Most households as well as the country are net purchasers of food goods and many do not have the income to purchase adequate quantities of food to meet family food requirements.

Some of the microenterprises will contribute directly to national food availability, producing poultry or cereal and vegetables with space irrigation, fattening small ruminants, or raising dairy cows. However, the microenterprise activities focus first and foremost on increasing household incomes and thus, the access of these vulnerable households to food. It will also help participants improve business skills so they can continue to find income earning opportunities in a changing economy. Many of these households are displaced persons, women headed households, or the families of persons living with HIV/AIDS (PLWHA). The income from these activities will help empower participating women, as well as increase household assets, which will contribute to improving the present and future food security and nutrition of their households. It is intended that these activities should be accompanied by services that provide information and training on improving food utilization in maternal and child nutrition and health, as well as on how to avoid contracting HIV/AIDS and addressing the needs of PLWHA. While presently very limited in scale, the intention is that these activities will be scaled up to reach larger numbers of the poor and vulnerable populations. With the help of these microenterprise activities, hopefully many of these vulnerable households will achieve a level of self-reliance that allows them to take advantage of the opportunities to enter the commercial economy offered through the enterprise development activities.

A3. The Public Sector Food Security Management Cluster

The public sector food security management cluster is focused on improving the policy environment for food security and economic growth in the agricultural sector. There are several activities that provide USAID/Eritrea with an opportunity to make a concrete contribution to economic growth and/or food security, and enter into a policy dialog with the MoA to improve the environment for related activities.

Activities on striga resistance in sorghum and production of seed stock for planting are small targeted opportunities to contribute directly to food availability. Demands for the delivery of agricultural inputs exceed the capacity of the MoA to supply those inputs. Small moves toward the privatization of input delivery, such as in seeds, will slowly begin to establish a capacity to meet these expanding needs. The Grain Board regulates the import and delivery of food aid and commercial food stocks, as well affecting their price by controlling supplies. Building capacity in the Grain Board which improves its efficiency and effectiveness in accomplishing these tasks will contribute directly to national food security. Continuation and improvement in the FEWSNET activities will help predict harvests and food aid needs, also contributing directly to national food security. FEWS will also provide linkages to regional mapping and drought monitoring activities as well as price information for basic food goods in regional markets.

B. Poverty Reduction

The contributions of the Economic Growth and Food Security SO to poverty reduction strongly parallel those outlined in the food security section above, especially those related to income and food access. Past studies and experience indicate that redistribution of income in most low-income countries is not adequate to address poverty reduction and food security. Rather, the solution to poverty reduction and food security must come from economic growth. Only when economies experience relatively rapid growth (usually requiring 6 percent and above) over several years does one observe a decline in the percentage of the population living below the poverty line. Achieving this rapid economic growth is thus the primary mechanism for reducing poverty.

Studies and experience also demonstrate that in most low-income countries, particularly those in which a large majority of the population live in rural areas and are dependent on the rural economy, successful industrialization typically has to be led by the agricultural sector. Industrialization needs to be based on the processing of agricultural products and production of goods in demand by the large rural population. This allows for employment and income generating opportunities at both the production and processing levels and produces a significant multiplier effect that is not evident when producing only for urban elites. By improving the efficiency of agricultural subsectors and expanding the role of private sector enterprise in agricultural production and processing, the enterprise development activities will contribute to economic growth and poverty alleviation.

Many of the poorest and most vulnerable populations have little capacity to engage in the enterprise development activities. They neither have the assets (example - livestock) to exploit or use as collateral on loans, nor can they stand the risk of a substantial investment. The microenterprise activities will help these vulnerable groups find income generating activities, accumulate assets and provide rotational loans through group savings and in very small amounts to minimize risks. Over time, the microenterprise activities will improve the capacity of these vulnerable groups to manage investments, provide small loans of increasing size, and help households build the assets they need to improve food security and expand their investment in small income generating activities. These activities will alleviate poverty directly as well as build the capacity of these vulnerable populations to integrate into the commercial economy.

C. Gender

Estimates of the number and percentage of female headed households (FHH) in Eritrea are quite varied, but most often fall in the range from 35 to 46 percent of all households. Other statistics indicate that women own 43 percent of micro, small and medium enterprises and provide more than 30 percent of the labor force in the formal sector, and probably an even higher percentage in the informal sector. Given the very important economic roles that women fulfill in Eritrea, it seems evident that rapid economic growth will not take place unless women’s opportunities to expand their enterprises and increase income also increase substantially. In order for this to happen, it will be necessary to target women for loans, services and income generating activities, since there are strong cultural forces that tend to result in women being neglected in these, and other areas. The Eritrean legal framework offers women equal political, economic, social and

cultural rights including equal access to land and inheritance divorce and custody. However, many if not most of these rights remain difficult to implement at the village level. (Spring, 2002)

Women tend to be involved in smaller enterprises and take smaller loans than men. Experience in credit programs throughout Africa demonstrate that women are more likely to reach their investment objectives, repay loans, and use the income to meet the basic needs of the household than men. Therefore, targeting women in enterprise development activities helps meet poverty alleviation and food security objectives as well as those of enterprise development *per se*. Enterprise development activities will target a number of subsectors including poultry, horticulture, livestock fattening, dairy, cotton garment and leather goods manufacturing that all have a high proportion of participating women. Subsector activities will target women's groups and work with organizations like the National Council or Eritrean Women to ensure women's needs and circumstances are considered.

Microenterprise activities, and particularly the savings and credit approach used by CARE International have a high percentage of women participants (60 to 94 percent, depending on the source). These activities target vulnerable populations and in many cases involve women who are displaced persons and from minority ethnic groups. Participants, predominantly women, are learning business and management skills, creating or expanding income generating enterprises, and establishing a base to serve as a continuing source of savings and group credit, as well as maintaining very high loan repayment rates. The increased income contributes directly to household food security and poverty alleviation. Some of the income generating activities contribute to increased food availability. The experience and skills developed will help allow more of the vulnerable population to engage in mainstream subsector and enterprise development activities, providing additional opportunities to improve incomes and participation in growing subsectors of the economy. In the future, complementary NGO activities will increasingly facilitate participant's inclusion in activities that do provide information and training regarding neonatal health and nutrition services as well as sensitization to the HIV/AIDS issue, and addressing the needs of PLWHA.

GOE extension services tend to have a limited focus on women and the services that are provided tend to be provided largely by home economy agents focused on "women's issues" such as neonatal and maternal health care, child nutrition, HIV/AIDS awareness, etc. Women tend to have limited access to agricultural inputs and information on new technology. The USAID program will attempt to change these tendencies in those subsectors targeted for improvements of the entire commodity chain. While supporting the provision of neonatal and maternal health care, child nutrition, HIV/AIDS awareness services, in these subsectors, USAID will explore providing alternative approaches to agricultural research and extension. This may include contracting MoA researchers to undertake specific research activities requested by subsector participants, or contracting extension agents to provide extension services to members of producer associations. In these activities, USAID will ensure that women are also targeted for technology transfer and extension services. Perhaps the establishment of these alternative approaches to providing agricultural research and extension services can provide a model that can be adopted by the GOE and other donors involved in these activities. Given that women have limited access to oxen and plowing in most Eritrean cultures, targeting women and women's

groups for mechanization services might help to level the playing field for women headed rural households.

D. HIV/AIDS

Biological testing by the HAMSET project in 2001 indicates a 3-4 percent incidence of HIV/AIDS. While this is low by comparison to much of Eastern and Southern Africa, five percent is often considered the incidence rate at which the epidemic begins to race out of control. However, there is a significant fear that demobilization of the soldiers as well as the return of commercial sex workers to their homes and villages, may lead to a sudden jump in the rate of incidence. Estimates in some of the severely affected countries in Southern and Eastern Africa indicate that the rural labor pool has declined by 20 percent because of the affects of HIV/AIDS on labor availability. A significant increase in the incidence of HIV/AIDS could push Eritrea back into the difficult labor situation that it has experience during military mobilization, and that would severely constrain future economic growth and food security.

Successful enterprise development will impact poverty alleviation and food security, and these in turn will likely impact peoples ability to avoid risky behaviors as well as to address the needs of PLWHA. To the extent that enterprise development provides people with employment and income earning opportunities then it will reduce the economic incentive to engage in risky behaviors and increase the where-with-all of households to meet the nutritional and medical needs of PLWHA. To the extend that enterprise development activities increase the availability of nutrient rich food products which serve the nutritional needs of PLWHA, then PLWHA will remain healthier and live longer, helping extend the period in which they remain productive members of their households. One way to increase this impact would be to develop programs that target addressing HIV/AIDS in the workplace, particularly for larger employers and various groups and associations in the subsectors targeted for intervention by the enterprise development program. The Employers Federation of Eritrea is reportedly an early supporter of the HAMSET program and a strong supporter of HIV/AIDS awareness activities. Use of the workplace for training to raise awareness of HIV/AIDS prevention and addressing the needs of PLWHA and even for condom distribution might make a substantial contribution to anti-HIV/AIDS efforts.

Microenterprise activities probably have a closer linkage to HIV/AIDS because they directly target socially and economically vulnerable populations, which are among those most likely to engage in risky behaviors for economic reasons. To the extent that microenterprise activities provide these people with income earning opportunities, then this reduced the likelihood that particularly young women will exchange sexual favors for food or sell their bodies to obtain income to feed their families. To the extent that the microenterprise activities increase access to food and nutrient rich foods and needed medications, then it will help PLWHA to remain healthier, live longer, and extend the period in which they remain productive members of their households. The microenterprise activities are intended to serve as a vehicle for providing health, nutrition and HIV/AIDS information and training to target populations. It is hoped and expected that the self-selecting savings and credit groups will provide a supportive environment for addressing the practical needs of its members. MoA home economics agents have reportedly received training to help provide this type of training. The National Union of Eritrean Women and the National Union of Youth and Students also have active programs in providing HIV/AIDS awareness training and support to PLWHA. Hopefully CARE/Vision Eritrea/Haben

can both learn from these organizations as well as contribute to the capacity of these organizations to address HIV/AIDS in other zones of intervention.

As mentioned previously, it is expected that the MoA home economics agents will be assigned important responsibilities for diffusing health, nutrition, family planning and HIV/AIDS information and training to rural women under the HAMSET program. USAID can help improve their effectiveness by supporting these activities with regard to target populations and subsectors through the microenterprise and enterprise development programs. If necessary, additional training could be provided to these home economy agents, as well as material support through the microenterprise and subsector intervention programs. While this would be support on a limited scale, it might serve as a model for other donors interested in supporting anti-HIV/AIDS activities.

E. Participation

One of the primary objectives of the enterprise development subsector interventions is to bring together stakeholders from throughout the subsector to identify problems and begin to work together to resolve them. Where this has been successful in other countries, it has resulted in the formation of a body which represents the participants and stakeholders in the subsector. This body typically begins to make decisions and act on behalf of the subsector and to advocate for policies and interventions that are beneficial to the stakeholders in the subsector. Typically it would also facilitate the development of producers associations and possibly associations of other groups within the subsector such as marketers. The skills and attitudes developed during this process would be strongly supportive of improved democracy and governance. The process would be based on democratic principles and financial transparency. While different groups of participants throughout the subsector may have interests that are at times complementary and at time conflicting, the process will be facilitated to help them focus on elements of mutual interest. Over time, these groups, their skills and their advocacy would contribute to the breadth and depth of civil society in Eritrea.

A similar argument holds for the small savings and credit groups developed under the microfinance activity. These groups are self-selecting and after some initial training develop their own rules for participation, saving and credit allocation. The training stresses democratic principles, financial transparency and group cohesion. These grassroots level groups gain the skills and experience necessary for democracy and governance that can be transferred to other local institutions. Over time, it is expected that these groups will be linked in regional and possibly a national federation. Such organizations will advocate for their member groups and in this manner contribute to the development of Eritrean civil society.

F. Cross-Cutting Issue Findings and Conclusions

1. The three programming clusters envisioned for the Economic Growth and Food Security SO will not solve, but each will contribute to the long-run resolution of Eritrean food security:
    a. *Enterprise development* will contribute to domestic food production and to increasing exports, which help provide foreign exchange to pay for food imports. Increased food production helps increase food availability while income from the

sale of higher-value products and employment in production and processing activities helps increase access to food. The diversification provided through enterprise development is critical to household incomes and the economic sustainability of commercial enterprises.

b. *Microenterprise activities* will target vulnerable populations. They may contribute to household food availability, but primarily target raising household incomes and thus access to the food required by household members. To the extent that microenterprise activities will serve as a vehicle for the delivery of health, nutrition, family planning and HIV/AIDS information to participants, particularly rural women, it will also help improve food utilization.

c. *Public sector food security management* activities are intended to help provide a supportive environment for economic growth, food security and enterprise development measures in Eritrea. It will also provide the vehicle for USAID to enter into policy negotiations with the BoA, specifically concerning policies that affect the implementation of USAID supported activities in the agricultural sector. Interventions will focus on specific targets of opportunity for which USAID has significant experience and proven capacity to implement.

2. The redistribution of income in most low-income countries is not adequate to address poverty reduction and food security. Rather, the solution to poverty reduction and food security must come from economic growth.
3. Many of the poorest and most vulnerable populations have little capacity to withstand the risk of, or engage in a substantial investment. The microenterprise activities will help these vulnerable groups find income generating activities, accumulate assets and provide rotational loans in very small amounts through group savings to minimize risks.
4. From 35 to 46 percent of Eritrean households are female headed; women own 43 percent of micro-, small and medium enterprises and provide more than 30 percent of the labor force. Given the very important economic roles that women fulfill in Eritrea, it seems evident that rapid economic growth will not take place unless women's opportunities to participate also increase substantially. Targeting women in enterprise development and microenterprise activities helps meet poverty alleviation and food security objectives.
5. Increased food availability, access and improved utilization facilitated through enterprise development and microenterprise activities will help PLWHA remain healthier, live longer, and help extend the period in which they remain productive members of their households. Increased income from enterprise development and microenterprise activities will reduce the economic incentives for poor and vulnerable populations to engage in risky behavior. The MoA home economy agents are responsible for diffusing health, nutrition, family planning and HIV/AIDS messages to rural women under the HAMSET program.
6. Both subsector development activities and microenterprise savings and credit groups help develop the skills and experience in group management, group organization, and transparent finances and accounting that contribute to the development of and participation in civil society and its role in improved democracy and governance.

F. Cross-Cutting Issue Recommendations

1. Microenterprise activities should target vulnerable populations and be scaled up to reach more people. They should target increasing household assets as a means of withstanding future shocks in addition to immediate income and be accompanied by activities which provide health, nutrition, family planning and HIV/AIDS information and training.
2. USAID should undertake efforts in the public sector to improve the environment for economic growth, food security, enterprise development and micro-development activities. USAID should use these efforts as a basis to enter into negotiation with the MoA on policy issues, starting with those that specifically affect the implementation of USAID programs.
3. Enterprise development activities should target some subsectors in which women are involved and help provide women with opportunities to expand their participation in the commercial economy. They should target post-harvest conditioning and processing of agricultural products, which would be a likely area for women's involvement. Given cultural constraints, female headed households might benefit significantly from access to mechanized services, particularly for land preparation.
4. Subsector development interventions should strive to help integrate rural households into the commercial economy. Subsector development interventions should include efforts to address HIV/AIDS in the workplace.

SECTION IX

Summary Conclusions and Recommendations

A. Summary Recommendations

A1. REIP Financing Component

1. Access to financing resources should be opened to two or more banks on a competitive basis that can work with the risk profile and processing requirements of different segments of the market.
2. Induce participating banks to assume more risk by providing direct capital for participating banks to use in making loans in the form of a guarantee facility which would cover 50 percent of the bank's risk in the case of default, subject to specific criteria for eligible loans.
3. Consider providing a separate line of US$ financing to cover the foreign exchange needs of businesses importing equipment and other inputs.
4. Support the development of a well-staffed Agricultural Credit Unit within each participating bank.
5. Clearly separate banking functions (credit analysis and supervision) and business development services. Rearrange roles and responsibilities such that these functions are performed by the banks rather than by the REU.
6. Some indicators to use in selecting banks for participation in a credit guarantee facility include the bank's willingness to adopt the following policies:

    - Charging of market linked real interest rates;
    - Regular aging of portfolio at risk (PAR), at least quarterly;
    - Adoption of proactive delinquency management policies and practices; and
    - An institutional policy focused on increasing recovery rates in program related lending.
    - Access to a standardized banking MIS, like the one being installed by Kindle at the Central Bank, to improve loan tracking and credit supervision.

A2. REU Component

1. The REU should consider using more expatriate technical assistance to help train staff, and provide services which the staff does not yet have to capacity to provide at a professional level. USAID should consider placing qualified expatriate staff in the REU to develop its capacity to facilitate the delivery of business development services (training for consultants and entrepreneurs) and agricultural business services (subsector studies and the developing a basis to provide market and marketing information).
2. The REU should withdraw from preparing CBER loan applications, providing loan analysis, and loan supervision. These are banking functions and should be done by the

CBER. However, this withdrawal should be coordinated with the CBER to allow it time to increase its own loan processing capacity.

3. The REU should transition to training entrepreneurs and service providers to prepare business plans and strategies to start-up, improve or expand enterprises rather than preparing business plans for the entrepreneurs. This training should be provided in group settings, perhaps in collaboration with a university, commercial training institute or other appropriate educational facility. Given low literacy levels, it may be necessary to cost-share the professional preparation of business plans with the enterprises and certify qualified service providers. The REU should base participation of the private sector in providing BDS services and subsector studies on contracts with clear performance criteria and economic incentives. The REU should contract competent international technical assistance to work with Eritrean trainers to provide TOT to potential private sector service providers and REU staff, to help build the capacity for providing BDS services.
4. The REU should implement detailed subsector studies that provide much of the information required for business plans and feasibility studies of any enterprise in the subsector, rather than on business plans and feasibility studies for individual enterprises. Investigation of market potential should be considered a crucial component of a subsector study or project proposal. The REU should contract competent international technical assistance to work with Eritrean consultants to produce high-quality subsector studies and project proposals, and particularly the marketing aspects of those studies.
5. The poultry and horticultural activities should include detailed sector studies, a strong focus on markets and marketing information, and an effort to facilitate stakeholder participation in developing a subsector action plan. Stakeholders should self-identify constraints and opportunities and work together to see how different participants can help each other with the objective of making the flow of products through the entire sector more efficient. Subsector studies should provide factual information to help inform stakeholder decisions.
6. The REU does not have the capacity or institutional status to serve as an effective and functional PMU. The REIP should be reorganized to provide an effective and functional PMU that can make and enforce implementation decisions. The Advisory Board should serve the role of a steering committee that decides broad policy and project direction.
7. Since appropriate protective equipment and training in proper pesticide application are not readily available in Eritrea, and particularly to smallholder farmers,
8. USAID environmental mitigation efforts should focus on (continuous) improvement of the availability and use of protective equipment and safe pesticide application procedures, rather than making their availability and use a precondition for reimbursing loans that contain funding for pesticides.

A3. Agricultural Subsectors with Opportunities for Economic Growth

1. USAID/Eritrea should explore the possibility with the GOE of increased privatization of parastatals and party-owned companies, particularly those in targeted subsectors, to increase the potential for private sector investment.

2. A subsector approach should be adopted by USAID/Eritrea in identifying where to provide support and funding for enterprise development activities. The impacts on the domestic economy and food security as well export potential should be analyzed in choosing subsectors to support. Preliminary investigation indicates the following agricultural subsectors have potential for economic growth:

    - Poultry
    - Horticulture: ornamentals, vegetables and fruit
    - Dairy
    - Animal fattening
    - Hides and leather
    - Fisheries
    - Cotton

3. Detailed subsector studies should be undertaken to confirm this potential and provide factual information on constraints and opportunities that can guide actions to develop each subsector. These studies and activities should place an emphasis on markets and market information and provide much of the information needed for feasibility studies by individual enterprises in the sector.
4. In poultry, dairy and animal fattening, activities should be considered at both the microenterprise and commercial levels, with efforts made to integrate the two.
5. If hides and leather or cotton are chosen, a dualistic approach should be developed which exports high quality unprocessed raw materials in the short-term, while attempting to expand the cotton apparel and leather goods manufacturing aspects. Upgrading the tanneries and textiles should not be supported until cotton apparel and leather goods manufacturing have expanded and appear sustainable, and therefore provide the demand for whatever products the tanneries and textile facilities will be upgraded to provide.

A4. Microenterprise Component

1. USAID/ Eritrea should expand microenterprise activities similar to the Community Based Savings and Credit Association Project.
2. Microenterprise activities should continue to target vulnerable populations.
3. The microenterprise activities should be accompanied by and used as a mechanism to diffuse health, nutrition, family planning and HIV/AIDS messages to rural women and incorporate the participation of MoA home economy agents when practical.
4. Grant funding should be made available for expansion and consolidation of this approach to extend basic financial services to the target vulnerable household group for a period of up to five years. This would allow the initiative to scale up to reasonable annual growth rates, reach many more beneficiaries with services and achieve operating sustainability.
5. USAID/Eritrea and grant recipients should agree on target values for the following indicators:

    - Numbers of poor clients reached;

- Numbers of CSCAs in place and functioning to extend financial services to members;
- Amount of savings mobilized;
- Amount and number of outstanding loans;
- Annual growth rate in outstanding loans; and
- Incremental annual targets for achieving operational sustainability and financial sustainability.

6. Grant support should be extended to a qualified PVO/NGO partnership to cover basic staff, equipment and technical costs of extending the model in the field. In addition, grant support should be provided to the PVO/NGO partnership to do the following:

   - Formalize established savings and credit associations (CSCAs) into village banks;
   - Develop a framework for linking such autonomous, self managed village banks in a Federation which could in a later phase be served by an Apex Facility;
   - Design the Apex Facility to mobilize excess savings capital from within the system and channel these funds to deficit areas in order to meet effective credit demand among poor households.

7. Care should be taken to link microenterprise participants in subsectors targeted for enterprise development initiatives to those subsector activities.

A5. Public Sector Food Security Management

1. Provide capacity building and technical assistance to the Grain Board, to move toward greater liberalization of cereal markets and improve its effectiveness in addressing the contradiction between grain price stabilization policies and policies to improve incentives for farmers to increase cereal production.
2. Continue support to FEWSNET and its relationship with regional mapping and famine monitoring services of IGAD to help forecast harvest results and food needs in Eritrea in a manner that is both transparent and consensual. Given concerns for the lack of information sharing and transparent forecasts at NFIS, USAID/Eritrea should consider allowing FEWS NET to establish an office independent of the NFIS.
3. Long-term efforts to reduce the risks of rainfed agriculture and soil erosion under semi-arid (dryland farming) conditions should be supported, in particular, efforts to expand water harvesting, water conservation and spate irrigation and also efforts to protect against wind erosion. Consider funding support to the Eritrean agricultural research system by ICRISAT and ICARDA and participation of Eritrea's NARS in ASARECA's regional networks to help provide access to needed technologies. Other forms of irrigation should be supported in the context of producing high-value products that can pay for the irrigation infrastructure. Where and if feasible, the use of water conserving irrigation technologies should be encouraged.
4. USAID/Eritrea should facilitate making available the results of mapping groundwater resources funded by OFDA which identify high-output rechargeable aquifers. Pilot activities to develop these resources might make a key contribution to emergency drought relief efforts.

5. Support the development of striga resistant sorghum varieties as a target of opportunity that takes advantage of the capacity developed by Purdue University and the INSORMIL CRSP. Leverage the expected popularity of these striga resistant sorghum varieties by entering into negotiations with the MoA to facilitate the development of a private sector seed production industry, based on the multiplication of these varieties.
6. Consider working with the GOE to pass regulations on pesticides and agricultural chemicals and facilitate a deliberate liberalization of MoA controls on specialty fertilizers and pesticides.
7. Consider providing technical assistance to help the MoA provide training and build capacity to analyze private sector capacity to maintain operations and purchase government owned mechanization assets and large commercial farm assets.

A6. Cross-Cutting Issues

1. Subsector development interventions should strive to help integrate rural households into the commercial economy. Subsector development interventions should include efforts to address HIV/AIDS in the workplace.
2. Enterprise development activities should target some subsectors in which women are involved and help provide women with opportunities to expand their participation in the commercial economy. They should target post-harvest conditioning and processing of agricultural products, which would be a likely area for women's involvement. Given cultural constraints, female headed households might benefit significantly from access to mechanized services, particularly for land preparation.
3. Microenterprise activities should target vulnerable populations and be scaled up to reach more people. They should target increasing household assets as a means of withstanding future shocks in addition to immediate income and be accompanied by activities which provide health, nutrition, family planning and HIV/AIDS information and training.
4. USAID should undertake efforts in the public sector to improve the environment for economic growth, food security, enterprise development and micro-development activities. USAID should use these efforts as a basis to enter into negotiation with the MoA on policy issues, starting with those that specifically affect the implementation of USAID programs.

B. Summary Findings and Conclusions

B1. REIP Financing Component

1. The CBER has provided emergency and EIF lending under extremely difficult conditions related to the recent hostilities with Ethiopia, including: the loss of trained credit staff and interruption of capacity building programs, the forced closure and destruction of some of its offices in the Gash Barka and Debub regions, and the loss of substantial loan assets in those same regions due to war damage to businesses.
2. Under pressure to respond to the national crisis the CBER made 386 loans totaling over $5.0 million under the ERCS program and staff indicate there is a reasonable chance that most loans will be repaid. CBER lending activities under the ERCS and EIF have supported viable agricultural production enterprises which are adding value and

supplying the domestic market with cereals, vegetables, fruits and livestock and dairy products.

3. The CBER is interesting in lending in the agricultural sector and helping existing clients return to viability so that they have the means to repay pre-war loans. However, there is little evidence as yet that CBER central bank management is as a matter of policy exploring new market opportunities to lend into the rural sector. This suggests that more than one bank should participate in future rural enterprise lending programs.

    - The CBER is most comfortable providing direct financing to agricultural activities in the range of ERN 30,000 to ERN 800,000 and does not regard itself as a provider of long-term investment financing. The Eritrean Development and Investment Bank (EDIB) is most comfortable lending in the ERN 200,000 to ERN 2,000,000 range to agricultural enterprises.

4. Lessons learned from the use of line of credit facilities indicate that the resulting loans tend to be made with less rigor than when banks are at risk for the loans. Both the CBER and the EDIB might profitably benefit from loan guarantee facilities. A 50 percent loan guarantee program would likely induce the CBER and other banks to take some exposure on loans to private rural enterprise. It would also encourage them to sharpen the skills of credit staff in project analysis and cash flow analysis as part of credit appraisal. Finally it would encourage the boards of this and other participating banks to adopt the policy of doing cash flow lending. One mechanism for providing such a guarantee would be the USAID supported Development Credit Authority (DCA), but the DCA only works with private banks, and none presently exist in Eritrea. An alternative and more flexible mechanism would be for USAID /Eritrea to directly provide guarantee funds covering 50 percent of the risk on loans.
5. CBER credit staff don't do and may not yet be capable of doing full credit and project analysis on agricultural and industrial projects. Lending remains based on collateral, familiarity with the customer, his/her asset base and prior credit history ("the comfort factor"). Lack of a fully computerized system constrains the bank's capacity to track and manage loans for higher rates of loan recovery.
6. The CBER is not using its considerable liquidity to diversify savings and credit products to meet the needs of the emerging private sector in Eritrea. Constrained by the national crisis and its impact on the bank, the structuring of the ERCS and EIF loan programs have not succeeded in providing the CBER with sufficient skills and incentives to diversify products and attract new clients. To help create more profitable, market oriented banks, USAID may have to consider raising the issue of having the government permit banks to charge positive, inflation adjusted interest rates on project loans.
7. Future USAID supported enterprise development activities should make a clear separation between the provision of business development services and banking functions, of which the latter should be carried out under the discipline of a formal commercial bank.

B2. REU Component

1. The decision to not allow ACDI/VOCA to staff the REU to serve as the project management unit for the REIP has had negative implications for the performance of the REU and the REIP as a whole. Coordination of the three components of the REIP has been poor and the expected synergies have not been generated.
2. The REU would benefit significantly from the expertise available through increased use of short- and long-term technical assistance, particularly given the difficulty in attracting and keeping highly qualified personnel under present conditions in Eritrea. Extensive capacity building is still required, particularly to provide or facilitate TOT to potential service providers in the private sector. The REU demonstrates a public sector bias and problems in soliciting private sector participation appear to reflect a poor understanding of the private sector.
3. The present system of processing loans is not efficient and leads to long delays. The CBER doesn't accept REU recommendations and this leads to processing in multiple understaffed regional and national offices. The REU should leave loan processing to the CBER.
4. The REU's processing of loan applications results in the release of loan funds, but often does not train entrepreneurs to develop better and more bankable businesses. As an approach to providing business development services it has been neither effective nor efficient, and has done little to build BDS capacity in the economy. The provision of BDS has proven more effective when it is driven by demand from entrepreneurs who are seeking to start or improve their businesses.
5. Poultry and horticulture are among agricultural subsectors with potential for significant economic growth, as well as contributing to food security, poverty alleviation (household income and employment) and opportunities for women to improve their economic status. However, the planned poultry and horticulture subsector activities appear to be largely focused on the production side, even though experience indicates that the primary benefits of a subsector approach stem from being demand-driven.
6. The REU and CBER both complain that business plans and feasibility studies of loan applicants are weak, particularly with regard to a marketing strategy and market information. But the project which resulted from the REU's fisheries subsector study, The Dahlak Artisanal Fishery Development Project, is also weak on marketing. It fails to address the constraints and opportunities of the input supply organizations or existing seafood marketing firms, and only proposes some marketing interventions after the investment is made.
7. With the elimination of the ACDI project office, the Advisory Board was left as the only party within the REIP with the institutional position and power to make and enforce decisions, including those regarding implementation. The REU retains many of the functions of a PMU, but does so as the defacto, but never formalized, secretariat of the Advisory Board. The institutional structure, the REU's lack of institutional status and its lack of capacity does not allow it, as presently constituted, to serve as an effective PMU. The REIP would benefit greatly from a clarification of the roles and responsibilities of all parties involved and the establishment of an effective PMU.
8. USAID needs to find ways to pursue improved environmental, health and safety objectives in a manner that does not result in a blanket prohibition on the purchase of pesticides under the agricultural credit program.

B3. Agricultural Subsectors with Opportunities for Economic Growth

1. The lack of market information is one of the greatest constraints to both strategic planning for the agricultural sector and the development of viable private sector enterprises that contributes to economic growth and food security.
2. The fear that party-owned companies will step in to compete with enterprises that establish ventures with good profit potential is a strong deterrent to investment in Eritrea, even by the diaspora.
3. Eritrea needs to rebuild its export sector with a view toward competitiveness, but recognize that this will be a long-term proposition. Eritrean exporters have little experience selling into highly competitive markets that demand high-quality products. Some potential exporters can gain experience and hone competitive skills by targeting high-quality niche markets (eg. better restaurants and hotels, UMEE) within Eritrea.
4. Commercial or semi-commercial poultry production is successful in most peri-urban areas throughout Africa, but is only beginning in Eritrea where demand for chicken meat and eggs appears quite high. While there are a number of constraints, the key constraint is feed. If solutions to the feed constraint can be found, it should also be successful in Eritrea. This may require importing complete feeds from a neighboring country, given the shortage of cereals in Eritrea. A vibrant poultry subsector would make an important contribution to food security, household nutrition, and women's income. At present, most chicken production is done by women in their backyards. It should be possible to integrate household and commercial production in the poultry subsector.
5. Like poultry, dairy has great potential to improve household level food security and nutrition, while at the same time providing a major source of income for participating households. The basic dairy infrastructure has been established around Asmara and can serve as one focus of a dairy subsector activity. Small-scale processing units likely have the potential to help develop a dairy processing industry in smaller towns. USAID funded dairy programs have successfully helped improve commercial dairy processing and household level production. The development and introduction of cross-bred cows through artificial insemination along with stall feeding have helped intensify milk production and dairy profitability.
6. Animal fattening appears to have significant potential at the household level, where it is often done by women and helps increase and diversify household income controlled by women. Animal fattening also appears to have significant potential at the commercial level, with commercial activities focused on meeting urban demand and export possibilities. Eritrean livestock producers may have an opportunity to increase live animal exports to the Mid-East if they can convince Gulf State consumers that Eritrean livestock are free from Rift Valley Fever.
7. Exporting wet blue hides is a short- to medium-term opportunity for earning foreign exchange. If an incentive system can be devised, more and better quality hides can be collected to expand this opportunity. Successful manufacturing of leather goods depends much more on cheap labor and marketing connections than on the supply of hides and leather. Eritrean tanneries are largely obsolete and do not have the capacity to produce the quality of leather required to produce high-value leather goods that will find a market in high-income countries. Investment should be demand led. Initially

Eritrea should import high quality leather for use in establishing a leather goods processing industry that is guided by a close relationship with someone who is already a major player in high-income country markets. Once the leather goods processing industry is established and viable, then investment in the tanneries to produce the leather it is using should be investigated. If tanneries can produce the quality leather that the leather goods processing industry needs, and if the hides collected in Eritrea can be used to produce that quality of leather, then it will be possible to develop value-added throughout the subsector.

8. Estimates indicate that Eritrea could sustainably produce a large volume of fish and seafood annually and it is likely that an export market exists for much of what could be produced. While trawlers could help reach that capacity quickly, they tend to over fish and harm reefs, and are notoriously difficult to monitor. Artisanal fishing would increase employment opportunities and reduce the risk of exceeding sustainable yields and harming the reefs, and thus compromising potential tourism. Artisanal fishing has potential, but the subsector needs to get itself better organized to internally solve some of the constraints facing fishers, input suppliers, marketers and distributors. The subsector would benefit from training, technical assistance, and increased capital investment.
9. Shrimp farming appears to have significant economic potential. Although there is a great effort to mediate environmental impacts, it may face serious technical obstacles (shrimp health) and the possibility of releasing an exotic shrimp species raises the issue of potentially significant negative environmental impacts on the Red Sea.

B4. Microenterprise Component

1. The real impact of the CARE/VISION/HABEN (CARE) microenterprise activity is the strength of the methodology used to reach very poor women, who are the key to helping vulnerable households increase incomes and improve food security.
2. CARE microfinance loans are smaller than those of other microfinance lenders, averaging only about ERN 1000 or $74.
3. The CARE microfinance methodology is based on groups self-organizing and making their own decisions on how much to save, how savings will be used, loan terms, etc. This approach results in cohesiveness and a strong sense of ownership that enhances the long term sustainability of the groups as financial services providers.
4. CARE is well on its way to achieving its numerical targets and repayment rates using this methodology are about 98 percent.
5. The primary objectives of microenterprise grant support should be to:

    - Expand services to reach more poor women and vulnerable households with the means to achieve income and food security;
    - Establish an increased number of self managed savings and credit associations (CSCAs) as vehicle for extending and managing grassroots financial services; and
    - Strengthen the capacity of local implementing NGOS, so that they can continue to reach the very poor and provide services to other organizations in establishing and running a similar, tested model.

6. Microfinance intermediaries often require 6-8 years of support to achieve operational sustainability.
7. Activities in targeted subsectors offer the potential for linking women's income generating activities to providers of inputs and vital technical services, and eventually helping to "mainstream" women in the larger economy.

B5. Public Sector Food Security Management

1. Although there are a number of constraints to domestic food production, the primary constraint is lack of water. More than 99 percent of Eritrea is classified as arid or semi-arid. Even in the semi-arid areas, rainfall is highly variable and often inadequate for rainfed agriculture to be productive. Eritrea faces perhaps as many as 3 or 4 years out of 10, when rainfed agricultural production may fail. Given this high level of risk, for all practical purposes, farmers can not afford to invest in agricultural intensification in the absence of improved water management. Thus rainfed agriculture remains extensive, yields remain relatively low, and Eritrea produces only about 40 percent of its food needs. For all of these reasons, improving water management would appear to be the key to improving food production and the productivity of rainfed agriculture in Eritrea. The high risk and low reward (involving both low productivity and moderate prices), are strong disincentives to investment in rainfed agriculture by commercial enterprises.
2. Eritrea has a long tradition of nomadic or semi-nomadic animal production and low rainfall ecosystems may be better adapted to producing grass than rainfed crops. However, increasing population densities and farming have typically taken over the higher rainfall areas, and river valleys or lowlands that once served as a dry season refuge for transhumant herders. Without such refuges, the carrying capacity of those low rainfall ecosystems is drastically reduced and the livestock systems prone to disaster.
3. The GOE has attempted to increase food production by increasing the area cultivated and intensifying cropping with increased use of agricultural inputs (seeds, fertilizer, pesticides) and mechanization. The use of agricultural inputs and mechanization has been heavily subsidized by the GOE. These efforts focus primarily on Debub and Gash Barka, areas where 70 percent of the basic food crops are grown. The demand for these subsidized agricultural inputs now reportedly exceeds the delivery capacity of the MoA. The GOE would like to privatize the delivery of agricultural inputs, but given the government subsidies, the private sector has been largely unable to sell such products and has had no reason to build the infrastructure necessary for rural delivery.
4. Most land presently being irrigated is using spate irrigation which channels some of the excess flow of seasonal streams onto the fields to supplement the moisture received from rainfall. As practiced traditionally, this is more of a survival mechanism than an intensification of agricultural production.
5. In the Gash Barka area, there seems to be strong competition among large farm concessions to capture water from the Gash River or control a site where a relatively large dam could be built. There appears to be more relatively good quality land than potential surface water for irrigation. Most irrigated land in Gash Barka is used for relatively high value and/or permanent horticulture crops, cotton and alfalfa. It would appear that water is too scarce and the cost of irrigation too high to regularly irrigate large quantities of basic food crops, although basic food crops may be part of a rotation.

Most of the irrigation observed in Gash Barka is using open earthen ditches and gravity flow with the source being water pumped from the river, a weir on the river, or a dam. This is the cheapest way to irrigate, but also the most wasteful of the water resources. When water is moved several kilometers, these systems may lose as much water as they deliver to the field. This is good enterprise management, but questionable public policy. Eritrea is likely to run out of water for irrigation while there is still plenty of good land that could be irrigated.

6. Given the tendency toward continuous cultivation of sorghum, the dominant cereal crop, striga infestations are affecting ever larger areas. Appropriate cultural practices can help control striga, but there is a great need for striga resistant varieties. The INSORMIL CRSP has developed striga resistant cultivars that have helped breeding programs in other Sahelian countries develop locally adapted striga resistant varieties.
7. The MoA is in the process of revising its agricultural research and extension strategy to help achieve food security. Given limited staff and resources, the MoA appears to be open to innovative and alternative approaches to agricultural research and extension. One alternative extension strategy considered is the use of smallholder outgrower schemes in conjunction with large GOE-owned farm concessions, in which the large farm concession would provide cash crop marketing, input delivery and extension services. If the concessions are privatized, it is not clear whether or under what conditions the private sector might provide these services. It also is unclear if such concessions will be privatized or if the land will be allocated as smallholdings to a large number of ex-fighters. While USAID/Eritrea may not be in a position to underwrite the national agricultural research and extension programs, it may use alternative strategies to provide specific agricultural research and extension services in initiatives for selected subsectors.
8. The MoA is the primary source of seeds for planting crops, but demand reportedly exceeds its supply capacity. The private sector has helped meet this need in other countries and could in Eritrea if the government can reach some accommodation with the private sector that allows them to earn a profit growing seeds.
9. The Grain Board is trying to regulate and manage food stocks to feed a population with a large structural deficit and stabilize prices for those who may be able to purchase grain. Price stabilization (usually at a low level to help consumers) typically is contradictory to and impedes efforts to increase food production and make more food available at reasonable prices in the long run. Price stabilization often requires heavy subsidization and uses funding that might be used more effectively in other ways to improve food security.
10. Famine Early Warning Systems activities can make an important contribution to food security in Eritrea. However, FEWS NET management is very concerned about the lack of information sharing, transparency and consensus of forecasts emanating from the NFIS. The recent NFIS request for food aid is said to lack credibility. FEWS NET is rethinking its close involvement with the NFIS under these circumstances, and believes that it has an obligation to provide a transparent and therefore credible analysis of harvest prospects and probably food aid needs.

B6. Cross-Cutting Issues

1. The three programming clusters envisioned for the Economic Growth and Food Security SO will not solve, but each will contribute to the long-run resolution of Eritrean food security:

    a. Enterprise development will contribute to domestic food production and to increasing exports, which help provide foreign exchange to pay for food imports. Increased food production helps increase food availability while income from the sale of higher-value products and employment in production and processing activities helps increase access to food. The diversification provided through enterprise development is critical to household incomes and the economic sustainability of commercial enterprises.
    b. Microenterprise activities will target vulnerable populations. They may contribute to household food availability, but primarily target raising household incomes and thus access to the food required by household members. To the extent that microenterprise activities will serve as a vehicle for the delivery of health, nutrition, family planning and HIV/AIDS information to participants, particularly rural women, it will also help improve food utilization.
    c. Public sector food security management activities are intended to help provide a supportive environment for economic growth, food security and enterprise development measures in Eritrea. It will also provide the vehicle for USAID to enter into policy negotiations with the BoA, specifically concerning policies that affect the implementation of USAID supported activities in the agricultural sector. Interventions will focus on specific targets of opportunity for which USAID has significant experience and proven capacity to implement.

2. The redistribution of income in most low-income countries is not adequate to address poverty reduction and food security. Rather, the solution to poverty reduction and food security must come from economic growth.
3. Many of the poorest and most vulnerable populations have little capacity to withstand the risk of, or engage in a substantial investment. The microenterprise activities will help these vulnerable groups find income generating activities, accumulate assets and provide rotational loans in very small amounts through group savings to minimize risks.
4. From 35 to 46 percent of Eritrean households are female headed; women own 43 percent of micro-, small and medium enterprises and provide more than 30 percent of the labor force. Given the very important economic roles that women fulfill in Eritrea, it seems evident that rapid economic growth will not take place unless women's opportunities to participate also increase substantially. Targeting women in enterprise development and microenterprise activities helps meet poverty alleviation and food security objectives.
5. Increased food availability, access and improved utilization facilitated through enterprise development and microenterprise activities will help PLWHA remain healthier, live longer, and help extend the period in which they remain productive members of their households. Increased income from enterprise development and microenterprise activities will reduce the economic incentives for poor and vulnerable populations to engage in risky behavior. The MoA home economy agents are

responsible for diffusing health, nutrition, family planning and HIV/AIDS messages to rural women under the HAMSET program.

6. Both subsector development activities and microenterprise savings and credit groups help develop the skills and experience in group management, group organization, and transparent finances and accounting that contribute to the development of and participation in civil society and its role in improved democracy and governance.

ANNEX A

SCOPE OF WORK, ECONOMIC GROWTH AND FOOD SECURITY SECTOR ASSESSMENT, USAID ERITREA

ANNEX A

Scope of Work
Economic Growth and Food Security Sector Assessment
USAID Eritrea

I. Introduction

USAID Eritrea has developed a Concept Paper for a new Integrated Strategic Plan covering the 2003 - 2008 period. The concept was presented in Washington in mid-May, 2002. The Mission will be addressing the parameters identified during the final preparation of the ISP. This process is scheduled for completion by mid-summer 2002. Submission and review of the final ISP is slated for the first quarter FY03.

All three components of the Mission's portfolio are being revised, some more extensively than others and each is at a different stage in the process. This Scope of Work describes the task of the assessment scheduled for Investment Objective 2, the Mission's Enterprise Development program. Intensive review of the Health (IO1) and Human Capacity Development (IO3) will proceed under separate SOWs.

II. Background

During the next 3-5 years, agriculture will remain a major sector underlying Eritrea’s economic growth. Approximately 80 percent of the population depends on the sector in one way or another. The knowledge base and human resource capacity to improve productivity is low and Eritrea is chronically, structurally food insecure. In a normal year, Eritrea is able to produce about 60 % of the annual amount of basic grains required to feed its population, though the range of domestic production has varied from a low of 20 percent upwards to as high as 80 percent in 1998. About 110,000 metric tons of basic grains are imported annually, most with donor assistance.

The technological capacity and business acumen to compete in terms of adding value to agricultural products through further processing, packaging and market promotion is similarly underdeveloped. Eritrea's manufacturing capacity has long suffered from outdated technology, restricted market access (traditionally limited to trade with Ethiopia) a general lack of current market information and the knowledge and experience of how to use it. As a result, increase in productivity is low, thus increasing rural incomes or ensuring adequate food security is unlikely without making significant changes to the current system and practices. The GSE’s limited resources are stretched due to efforts to resettle IDPs and returnees and plans for the demobilization of soldiers. On a positive note, there will be an increase in available labor as a result of the resettlement and demobilization process. However, the skill levels of returning laborers will be

limited. In addition, their return will place greater pressures on the limited amount of arable land.

Some of the major constraints to increasing rural income and improving food security are:

- Low levels of productivity and an over dependence on rain-fed agriculture;
- Public sector-led interventions that distort factor markets and which discourage private sector involvement in services like agricultural mechanization, agricultural inputs supply;
- A policy environment that is not conducive to promoting foreign direct investment competition and sustainable agriculture growth; and
- A severe shortage of skilled human capital.

The recent conflict with Ethiopia has exacerbated these constraints by disrupting the traditional patterns of trade and commerce on which Eritrea's economy was particularly dependent. Also, since Eritrea's most important agricultural region suffered the worst ravages of the invasion and destruction accompanying the May 2000 offensive, the productive capacity of the region as been significantly compromised. For example, Gash-Barka and Debub had traditionally accounted for 70 percent of the basic grain production. Its contribution in the first full agricultural cycle after the invasion amounted to approximately 24 percent. Returning the region to its former potential is a priority. If necessary restorative steps are not taken, Eritrea's food security will continue to be compromised as the unexploded ordnance and landmines will not allow the speedy return of the displaced nor the agricultural service needed to resume normal agricultural activities.

After individual farmers, enterprises represent the agriculture sector's most important organizational element supporting development of the economy. With sufficient guidance and support existing and new enterprises have the potential to generate rural employment and increase production of key marketable food commodities. However, the impact on jobs and income will be slow in being felt. There are many challenges facing enterprise development.

The nascent private sector is under-capitalized, dependent on obsolete technology, operating far below capacity, and in product areas with limited trade-ability. Private investment remains low and is unlikely to support the level of production required for the country's development vision. The financial sector is not offering the range of credit instruments and banking services necessary to support the development of a modern, competitive economy. The GSE and donors expect that firm-to-firm cooperation, farmer--to-farmer arrangements and increased investment and development of human capital can mitigate the technological and managerial gaps for enterprises in Eritrea, especially in the agribusiness sector. For this to succeed and in order to also address Eritrea's

short-term food needs, greater support to boost the country's agricultural sector is very critical.

Under the existing IO, USAID has promoted “increased income of enterprises, primarily rural with emphasis on export”. The IO concentrated on developing credit and technical services support, and improving access to production, processing and marketing technology. Differences with the GSE on sourcing the technical assistance led to major changes in the integrated approach to providing technical assistance and credit originally envisioned. That and the outbreak of fighting contributed to major setbacks in the program implementation. Scheduled activities supporting production, introduction of more competitive technology, improved market access and enhanced valued-added for agricultural products, such as agribusiness might have developed, remained elusive.

The existing program has absorbed various shocks as a result of the conflict and generally diverted from its original focus on enterprise development. Under the Crisis Modifier, a contingency provision of the 1997-2002 Country Development Strategy or Investment Partnership, loans were provided to re-establish businesses affected by the conflict. Many of the loan recipients have been traditional bank clients, thus limiting expansion of new opportunities and newer enterprises. Thus, a broader range of services to enterprises should be provided if this sector is to have an impact on growth and income generation of agribusiness enterprises. Finally, the existing IO has addressed food security needs through coordinating and collaborating with the Office of Food for Peace and other USG agencies.

Important lessons were learned in the process of implementing the existing strategy. One such lesson was the success of the micro-credit pilot program implemented by a US PVO in the Gash Barka region. The regional governor now wants to expand the program to other areas in the region. Another lesson was the recognition by the counterparts of the importance and need for external technical assistance to enhance the effectiveness of rural enterprises. This had been refused under the program as modified by the GSE. Thus, while the overall focus of the SO remains valid, some adjustments are needed based on lessons learned and the need to address emerging post-conflict needs for reintegration. In addition, some adjustments are also necessary in view of what other donors have planned or have implemented during the past five years.

III. Objectives:

The objective of the Mission's revised approach under the ISP is to accelerate the expansion of the small and medium enterprise sector. As source sectors, agriculture and possibly light manufacturing appear initially promising because of the perception that each sector has significant potential for supporting the demobilization and reintegration effort by providing jobs and generating income.

However, that won't be accomplished without a concerted effort to address the principal constraints limiting the growth of the sector.

The purpose of this sector assessment is two-fold. The first is to conduct an evaluation of IO2, Enterprise Development as originally designed and implemented including continued support to the REU. The second is to identify and describe the opportunities for promoting economic growth in post-conflict Eritrea under an expanded SO by focusing on agriculture, particularly the agribusiness sub-sector. Except for the 18 months since the signing of the Peace Agreement, IO2 never has been implemented but in other than a situation of conflict. And as described in the Background section above, the experience in implementing IO2 has been - because of the disruptions caused by the war - anything but normal.
The post-conflict opportunities for involvement in the agricultural sector (because of DANIDA's withdrawal from Eritrea) are the two most significant changes affecting implementation of the Mission's Enterprise Development program. To date, the predominant form of assistance to enterprises has been in the form of loans (some $5 million thus far) for replenishing the inventory of small business ravaged during the May 2000 round of fighting.

The findings and recommendations of the IO2 sector assessment will provide critical input into the Mission's decisions on how to refine its support to small and medium enterprises as will be described under the new ISP.

The Mission anticipates that the IO2 sector assessment will proceed on several levels and to differing degrees of depth of analysis. These include:

- Macro-economic concerns such as foreign exchange levels and issues related to access, stated and actual;
- Issues related to Eritrea's ability to compete in regional and international markets such as:
  1) Access to technology, including information & communication linkages;
  2) Transportation linkages;
  3) Application of uniform standards and regulations;
  4) Level of business acumen and good practices;

- Micro-economic issues related to the investment climate in Eritrea, such as
  1) Openness to competition;
  2) Availability of investment incentives;
  3) Enabling legislation and implementing regulations such as the Commercial Code and legislation on cooperatives.

IV. Tasks

This sector assessment is then expected to complete, or significantly contribute, to the completion of the following:

A. Evaluate REIP:
The bilateral agreement between USAID and the GSE for Rural Enterprise Investment Partnership establishes the basis for a significant portion of the development assistance provided under the Mission's Enterprise Development Investment Objective or IO2. The rest of the IO2 portfolio is comprised of projects and activities related to food security and humanitarian assistance. Since its inception, the REIP program has been fraught with difficulties with staffing, direction content and the effects of externalities like the war. It needs to be thoroughly evaluated in accordance with established guidelines. The timely completion of this task is particularly critical in order for the Mission to have the option of simply amending the existing bilateral agreement to accommodate the new directions envisioned under the ISP.

B. Agriculture

Analyze the scope and depth of the disruption in trade and local agricultural production as a result of the conflict in the region. The impact on Eritrea's agricultural sector competitiveness should be broadly assessed with a view towards defining the priority areas for focusing the Mission's development assistance in the country's agricultural sector.

1. Identify the primary commodity sub-sector(s) offering the greatest potential for contributing to economic growth and for which Eritrea can be competitive.
2. Identify the key production constraints affecting Eritrea's ability to compete in domestic, regional and international markets.
3. Identify the respective roles of individuals in the public and private sector actors and the issues that constrain or facilitate the sub-sectors' ability to compete in domestic, regional and international markets.
4. Identify the context in which public and private sector can best collaborate in the interest of improving the performance of the agriculture sector.

C. Small and medium enterprise development

1. Review all current Mission activities under IO2 and IO3 related to the SME development and provide an (brief) assessment of their performance.

2. Review all available documentation relevant to other donor activities in SME development.

3. Define, characterize and assess the growth, employment, and income and export development characteristics, performance and opportunities of all SME sector programs. This task will be based on as many interviews as possible in order to develop a profile of the private sector and micro- and small-enterprises field. Interviews will include but not be limited to local organizations affiliated with business and labor such as the Chamber of Commerce, the Employers Federation, the Confederation of Eritrean Workers, etc., professional associations, local NGOs, USAID contractors, and cognizant representatives of government.

4. Inform and guide the Mission in exploiting identified opportunities.

D. Cross-strategic issues

1. Review food security situation in Eritrea and the mechanisms in place to respond to food sector issues/and or emergencies.
2. Analyze the available evidence related to income distribution and poverty in Eritrea and identify the most vulnerable groups and areas.

3. Assess the impact of HIV/AIDS (to the extent possible) on Eritrea's potential for income growth.

V. Delivery Schedule & Terms of Performance

Work shall commence with in-country consultations NLT July 25, 2002. The first draft of the assessment will be submitted to the Mission at a debriefing scheduled to take place before the team's departure. Final draft report is to be submitted to the Mission by September 15, 2002. The Mission will provide comments by September 20, 2002. The team is expected to submit the final report by October 1, 2002.

VI. Relationships & Responsibilities

The consultant(s) will work under the general supervision and guidance of the Team Leader, Enterprise Development (IO2). The team will also coordinate with Chief, Office of Human Capacity Development, (IO3) on assessing the prospects for enterprise development in the Information and Technology subsector. The Mission will clear on the technical qualifications of the members of the assessment team as well as the final timing and scheduling of the field work. USAID shall provide guidance on and provide logistical support for the arrangement of interviews with government officials as well as with key individuals in the private sector. The consultant(s) shall, in coordination with the Mission, be responsible for selecting and conducting the interviews, and requesting and soliciting information needed for the tasks.

VII. Level of Effort

As noted in the following, illustrative LOE table, the described tasks are expected to require a maximum of 81 workdays of expert expatriate assistance. If necessary, up to 17 workdays of the total authorized can be allotted to consultation in Washington, D.C. and up to 63 work days of in-country technical support. The final composition is subject to negotiation.

U.S. Advisory Staff:	Maximum Available for Consultation in Washington		Total LOE Authorized for Consultation in Washington and Work In-Country	
Team Leader & SME Specialist	7 wd		29 wd	
Economist & Agribusiness Advisor	5 wd		26 wd	
Private Sector Advisor	5 wd		26 wd	
Subtotal	17 workdays	*	81 workdays	

Eritrean Support Staff

Areas of expertise TBD: 3 persons x 21 workdays ea. 63 workdays

* Included in total LOE authorized

VIII. Special Provisions

A. Duty Post: Asmara, Eritrea and Washington, D.C. as specified.

B. Language Requirements: English is the official language in Eritrea and will be the language used in carrying out the tasks described in this SOW. However, the use of an interpreter to assist with the interviews in areas/situations where English is not spoken is authorized.

C. Professional and Technical Qualifications: The team must be experienced in agribusiness development, private sector investment and promotion, development of small and medium enterprises, credit assistance, marketing linkages facilitation and institutional and organizational development. The team should include both a macro and micro (enterprise-level) economist on the team in order to cover the range of economic considerations impacting on the enterprise sector. The team should be familiar with the operations of USAID's Africa Bureau and the programmatic considerations related to program development and implementation in USAID's ADS. The nature of this assignment and the country context requires that the team have excellent communications skills, patience and ability to work in a culturally and politically sensitive environment.

D. Access to Classified Information: The Consultant shall not have access to classified information.

E. Logistical Support: All logistical support will be provided by the Contractor. Support provided by USAID/Eritrea will be limited assistance in identifying and contacting individuals for interviews (including local support staff and advisors) and arranging meetings to the extent Mission staff is available and resources permit. The contractor will be expected to arrange and provide for its own secretarial, interpretation, and translation services; vehicle transport in Asmara; office and meeting space; as well as computer support.

F. Work Week: A six-day work week is authorized to coincide with the Eritrea's workweek, Monday through Saturday.

IX. Team Composition

Team Leader & Small and Medium Enterprise Development Specialist

Economist / Agricultural Economist / Agribusiness specialist - The economist will be a specialist with a minimum of (7-10) year's experience in analysis. The specialist will have experience in the review of macro and micro economic variables as they relate to SMEs and in the identification of trends and barriers in the marketplace.

Private Sector Specialist / Technology Advisor

Local Technical Support Staff: It is expected that the expatriate team will require the support of a variety of technically oriented short-term Eritrean consultants. Eritrean consultants might be required to inform the team as to the specific legal and regulatory environment in Eritrean (taxes, customs, banking, business licensing). The Mission will assist in identifying potential candidates. Final selection and contracting will be the responsibility of the contractor.

ANNEX B

ASSESSMENT TEAM AGENDA

ANNEX B.

Assessment Team Agenda
August 15 – October 4, 2002

August 15-17: Travel to and Arrival in Asmara, Eritrea

August 19: Meeting with USAID/Eritrea Mission Director, Dr. J.K. Cheema

August 19 – 23: Meetings with Key Partners and Informants in Asmara

August 24 – 25: Field Trip to Massawa, Eritrea
Sites visited: Ram Farms, Eri-Farms, Demas Farm, Sea Water Farms, Eritrea Fish, Osaki Fish.

August 26 – 27: Additional Meetings with Key Partners and Informants in Asmara

August 28 - September 1:

Field Trip to Anseba and Gash-Barka Zobas (Near the Towns of Keren, Barentu, Tessenei and Agordat)

Sites visited:

August 28: Elabered Estate, CBER Keren Branch, REU Keren Branch, Adal Poultry Farm, Juffa Vegetable and Livestock Fattening Farm.

August 29: CARE – Barentu, CBER Barentu Branch, REU Barentu Branch

August 30: CBER Tessenei Branch, Gash Agriculture, Sinit Agro-Industry, Gash Agro-Industry.

August 31: Alighidir Agricultural Enterprise

September 1: Ministry of Agriculture Banana Research Center (Agordat), Seghid Farm, Tekerat Association Farm

September 2 – 6: Report Writing and Further Meetings with USAID/Eritrea

September 7: Three of Four Team Members Depart for the U.S. Team Leader Remains in Asmara

September 7 – 17:	Report Writing and Further Meetings with USAID/Eritrea and Key Partners and Informants
September 18:	Submission of Draft Report to USAID/Eritrea
September 25:	Response from USAID/Eritrea on Draft Report
October 4:	Submission of Final Report

ANNEX C

CONTACTS

ANNEX C

Contacts

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ANNEX D

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ANNEX D

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ANNEX E

Assessment of the Credit Components of the Rural Enterprise Investment Partnership (REIP) – by Tamara J. Duggleby

ANNEX E

1. Assessment of the Credit Components of the Rural Enterprise Investment Partnership (REIP)

A. Development of the REIP Rural Financial Services Component

The implementation of the Rural Financial Services Component of the Rural Enterprise Investment Partnership (REIP) began in January l997, with the arrival of the Senior Banking Advisor (SBA) to set up the banking component. The financial services investment objectives of the REIP were to strengthen the Commercial Bank of Eritrea's (CBER) capacity to effectively extend financial services to a larger proportion of rural enterprises in the target program areas of Gash Barka, Anseba and Northern Red Sea, and to create a vehicle for long term placement of domestic and international equity into the Eritrean economy.

The Rural Financial Services Component was developed in response to a number of challenges to rapid growth in Eritrea's rural economy. These included a limited and thinly staffed rural financial system, comprised of one main commercial bank (CBER) with only nine bank branches outside the urban centers of Asmara and Massawa, which was stretched beyond its capacity to extend and service loans meeting client demand for business and consumer financing. Another key constraint to reconstruction and development in rural Eritrea was the lack of equity capital as well as foreign exchange to meet the import needs of agricultural production and processing enterprises.

In response to these and related constraints, the Rural Financial Services Component was designed to both strengthen and expand rural banking services and provide project finance to a larger proportion of viable rural small to medium scale enterprises in target areas. This program component was composed of a bank capacity building program, to be implemented under a Cooperative Agreement with ACDI/VOCA with CBER as its banking partner, and the Enterprise Investment Fund (EIF). The EIF was to be capitalized from USAID grant funds and engage in two types of financing: making of dollar denominated loans for importation of capital goods and, where appropriate, long term equity investments in profitable businesses.

Under the original project design, the EIF was to be managed on a day to day basis by a suitable Eritrean financial institution, with major investment decisions made subject to approval of a Board of Trustees on which USAID, the Government of Eritrea and emerging Eritrean private sector representatives would sit. The institution deemed most suited to the fund management role was CBER.

The banking technical assistance component was to be managed by ACDI/VOCA in close collaboration with CBER and the Senior Banking Advisor (SBA), to be provided by ACDI/VOCA in Washington. Financing proposals were to be developed through a participatory process by the enterprise borrower, the Rural Enterprise Unit (REU) and the CBER staff, facilitated as necessary by ACDI/VOCA short term technical assistance.

Shortly after the SBA arrived to begin work with CBER, USAID announced an agreement with GOE that GOE, and not ACDI/VOCA, would implement the REU and the EIF components. A separate bank account was opened for EIF in December, 1997, and funds in the amount of $2,0 million were allocated to it for making investment financing available for investment financing. EIF was shifted from the ACDI/VOCA project and placed under CBER management.

Under Revised Policies and Procedures for Operation of the Enterprise Investment Fund (EIF), submitted to the REIP Advisory Board in April, l998 by the SBA and the General Manager of REU, the Advisory

Board was to delegate full authority for operation of EIF to CBER, with the understanding that any losses incurred during its normal operation would be borne by the EIF, and not impact upon the assets of CBER.

In the context of uncertainty caused by changes in implementation responsibility, the SBA identified during spring, l997 the principal problems and constraints to expanding and improving the responsiveness of CBER to financing needs of private sector enterprises, and developed a three year Work Plan for CBER, addressing identified procedural, operating and policy constraints. In l998, he also designed the initial parameters for investment financing through the EIF facilities.

The SBA's Work Plan addressed a number of operating, staffing and policy constraints reducing the CBER's capacity to expand and manage responsive direct lending programs for rural and urban private sector enterprises. Key problems or constraints included the following:

- Exceptionally high loan delinquencies combined with low loan losses. Delinquencies were found to be the result largely of poor loan design, which did not take into account the actual business cycles of enterprises (particularly the case in agricultural production), and poor communications with borrowers.
- Low loans to deposit ratio (27%) as a result of too heavy reliance upon collateral based lending and credit staff shortages.
- Serious understaffing in credit officers, with only 15 working in the entire system.
- CBER operation as a matter of GOE policy with staff pay scales which were not competitive and about 50% below market at the time, a primary reason for understaffing.
- Lack of a written Credit Policy Manual, as well as a central Credit Administration to apply common policies and lending criteria throughout the bank.
- Lack of a proactive Board of Directors, which could make sound decisions without conflict of interest with their primary positions.
- Continued operation under interest rates set by GOE and the Bank of Eritrea (by industry), which were uneconomic and unrealistic from the standpoint of risk and cost of funds, e.g., CBER was not being allowed to price for the risk involved in making each type of loan.
- Bank undercapitalization due to GOE policy to declare l00% of CBER's after tax income as dividend, allowing no retained earnings for capital replacement or investment. Capital to risk assets ratio was less than 2%, against a banking industry standard of 8 to 11%.

By early l998, several key steps were taken to tackle the above problems under the three year Work Plan for CBER. These included:

- Hiring and training of 17 college graduates in Basic Credit and Basic Agricultural Lending, and their assignment to CBER branches throughout the system. These more than doubled the number of credit officers, and were provided as part of an overall target of adding 75 credit officers over 5 years. Twenty more were recruited for training in April 1998, but were conscripted into the army before they could be trained.

- A Credit Administration Unit (CA) was set up in CBER Headquarters, headed by the former Manager of Tessenei Branch and Supervised by the SBA.

- A written Loan Policy and Procedure Manual was prepared by the SBA and a committee of senior bank loan officers. Some of the policies have been implemented via Credit Administration Unit. The Board has to this day not considered the manual for approval, which has delayed the adoption of cashflow based lending. .

- A Kiosk Banks scheme was ;proposed for extending financial services to small businesses in selected towns on market days, but due to lack of GOE approval to own and run the vehicles, and the disruption of the l998-2000 invasion, it was never implemented.

War and Evacuation (l998-1999)

With the outbreak of war between Eritrea and Ethiopia in spring, l998, the SBA was evacuated from June l998 through July l999. During the same period, all 17 of the credit officers hired during l997 were conscripted, along with 20 newly hired ones not yet trained. Already short of staff before the war, CBER's staffing position become critical during the period. No credit or equity financing was provided to rural enterprises under the REIP. The GOE ordered a freeze on loan payments and interest accruals for conscripted borrowers, and the CBER loan portfolio began to deteriorate quickly. All training was suspended due to lack of staff.

During l998-1999, some policy changes were made based on overall recommendations of the SBA in the l997 task force report and Business Plan. These included:

- GOE allowance of CBER its own vehicles for community banking, while Kiosk Banking was held up for security reasons.
- Removal by GOE of mandated interest rates by economic sector, allowing CBER some freedom to "price for risk" within a minimum and maximum rate range (8 to 12%)
- GOE allowance of CBER to capitalize N 50 million net income annually to improve their capital ratio.
- Offering of 90 day Treasury Bills to CBER as an investment alternative for surplus funds, albeit at 2.5%, which was well below the 6% paid to savers
- GOE restructuring of the CBER Board to be more responsive to needs of the bank as lender to diverse sectors.

No changes, however, were made to the Government's payroll policy within the bank, which remains a critical constraint to its short and long term development.

SBA Return and Second Evacuation (1999-2000)

With the return of the SBA in 1999, the worsening staff shortage at CBER made it imperative to install a computerized operating system to alleviate the effects of the shortage and facilitate loan tracking and portfolio management. After a lengthy search period, a contract was awarded to an Irish firm with a successful track record in computerizing banks in Africa. That system is in place and being tested at the Bank of Eritrea, for use by CBER and Housing Bank. It is expected to be fully operational in early 2003.

Computer hardware was acquired, but has not been distributed to CBER rural branches due to security concerns growing out of the 2000 invasion. Hence, the branches in REIP target areas still operate with a very limited credit staff using a manual loan reporting system.

CBER made the decision to develop an internal training program, with courses responsive to its needs, despite shortage of trainable staff. The SBA designed and gave a course in management and collection of problem loans, for the few credit staff left.

With the May, 2000 invasion of Eritrea by Ethiopia, the SBA was evacuated for three months, bringing to a temporary halt the REIP bank capacity building program.

SBA Return from Evacuation

Upon his return in late summer 2000, the SBA conducted an analysis of the financial situation of the CBER. He found that because of the destruction wrought on farms and businesses by the invading Ethiopian army, loan losses in Gash Barka and Debub branches were projected at close to l00%. Added to related losses to other companies doing business in the areas, the bank estimated losses at N 420 million ($42 million at the time). All non military related commercial lending in rural branches had virtually come to a halt.

At this point in time, due largely to war related disruptions of business expansion and lending activity and lack of expertise, no financial services had been provided by the EIF in the form of equity investment and/or foreign exchange financing for imports. At the same time, war damage and economic slowdown in

Gash Barka and other regions had created an acute need for direct financing to rehabilitate businesses and support economic expansion.

B. Launching of the USAID Supported Crisis Modifier Program and ERCS

By July, 2000, hundreds of farm and non farm businesses in the Gash Barka target area had lost part or all of their main production assets. Crops, equipment and livestock were lost and commerce in agric related products was severely damaged. In response, USAID launched at that time the Crisis Modifier Program and allocated funding under it for three new components designed to provide needed financial support to rural micro, small and medium scale enterprises. These components included:

- **The Emergency Reconstruction Credit Scheme (ERCS)** to be implemented by CBER in collaboration with REU, to provide emergency loans to existing industrial and agricultural businesses seeking to rebuild productive assets after sustaining verifiable war related damage. Funding of $5,0 million was allocated from EIF to ERCS.

- **The Community Based Savings and Credit Association pilot program**, to be implemented by CARE and two local NGO partners (HABEN and VISION) to extend rural financial services to very vulnerable households through women managed S&C associations in Gash Barka, Maekel, and North Red Sea zobas, under an 18 month grant of $380,000.

- **The AFRICARE/VISION implemented Livestock Program**, funded through a grant of $ l,0 million for direct assistance to rural fattening enterprises.

The SBA designed criteria for the ERCS for the branches in Debub and Gash Barka, and the REIF committee approved the transfer of $5 million from REU and EIF to fund ERCS through the CBER.

At the time of the establishment of the ERCS emergency lending program, the amount of $2,680,000 was allocated for direct, non emergency lending to private enterprises. This funding was made available for CBER direct lending under the Enterprise Investment Fund (EIF) Credit Scheme, to enterprises in all regions with needs for expansion or start up capital. Loan criteria previously designed for the EIF were implemented for direct lending by CBER under this revised scheme. The SBA completed two more courses for CBER and delivered a one week reorientation program in basic and agricultural cashflow lending to 12 of the 17 original CBER credit officer trainees

By modification to the REIP Investment Partnership Agreement, CBER was to be reimbursed for the principal amount of loans extended to qualified borrowers, under both the ERCS and EIF credit schemes. Funds for $ reimbursement were to be drawn from the ACDI/VOCA Line of Credit (LOC) under the REIP. CBER was to make loans from and manage these funds separately, subject to different loan criteria and separate loan reporting.

D. Emergency Reconstruction Credit Scheme (ERCS)

The ERCS was launched in August, 2000, through three CBER branches in Tessenei, Agordat and Barentu. Loans were to be extended directly by the CBER to known clients (trade and services, industrial and agricultural) with verifiable losses as a result of the 1998-2000 war, with or without current loans from the bank. Subject to bank credit analysis, loans were to be extended up to the amount which would have been warranted by the client's pre-war level of business, with no loan maximum.

A amount of $5,0 million in USAID funding was allocated to be disbursed under ERCS over a l2 month period. According to program criteria developed by the SDA, the maximum loan term was to be 5 years. Loans were to be extended at an interest rate of 8% pa regardless of sub sector. The grace period was not to exceed 12 months and was to be justified by project cashflows. No collateral requirement was placed on these loans, leaving CBER free to set collateral as it deemed necessary.

Repayments to CBER were to become the property of CBER, e.g., it could directly place these reflows back into its capital without re-lending. This was done so that the bank could begin to build up its capital after war related loan losses and eventually reach capital adequacy according to international banking standards. CBER was to be reimbursed for the principal amount of the loan extended through the ACDI/VOCA LOC, upon USAID approval of reimbursement requests.

Lending Activity Under the ERCS

Due to pressures to extend loans to damaged existing businesses following the war, CBER lending under the REIP began earlier under the ERCS. The first tranche of $949,473 was extended in August-September, 2000 and disbursed in October-November, 2000.

During a 23 month period (August 2000 through July 2002), CBER extended 386 loans through the ERCS, for a total of N 50,972,851 ($5,048,269.91 in total claims submitted for reimbursement via REIP). As of 8/21/02, the bank had received loan reimbursements for $4,931,818.70.

According to loan statistics kept through July, 2002 by USAID/Eritrea on loan reimbursements to CBER under REIP, the bulk of the ERCS money by dollar amount has gone into lending to domestic trade and services businesses (70%), with about 27% extended in loans to agriculture, 2% to industry and 1% to mining. The amount extended to agriculture roughly corresponds to CBER's estimated present 30% in loans outstanding to agriculture on a total portfolio basis.

Examination of Summary Loan Sheets provided by CBER through 7/20/02 as well as discussions with headquarters managers and branch managers in the REIP target area, indicate that ERCS funds were used to make a wide range of loan sizes, ranging from as small as N5000 ($500 at an average exchange rate of N10/$1) extended to a retail shop for restocking in Barentu, to N 4,0 million ($400,000) provided to a mixed commercial agricultural enterprise near Tessenei, used to replace machinery and livestock and purchase crop inputs.

Loans for trade and services businesses have generally been smaller (N 10,000 to N 400,000) and have been extended to retailers of food products, clothes, fuel, construction and agricultural materials, as well two wholesalers of (respectively) vegetables and skins and hides. Loans have also been accorded to a number of garages, small hotels and bar/restaurants and two small grain mills.

Agricultural related projects have received loans of from N 20,000 ($2000) to N 100,000 ($l0,000) for small scale mixed farming, to loans of as large as N 350,000 ($35,000) to N 4,0 million ($400,000) for medium to large scale mixed farming, in the areas of horticulture and mixed agriculture (cereals, vegetables and fruits and livestock)

The majority of the loans by amount granted range from N 100,000 ($10,000) to N 1,0 million ($100,000) Discussions held with CBER Headquarters and Branch Managers indicate that this is a range in which the bank is probably more comfortable in making loans to rural enterprises.

Summary loan statistics maintained at USAID by cycles of reimbursements requested, indicate that ERCS funds by number of loans have gone disproportionately to male borrowers (70%) with about 30% being accorded to women. Field discussions at CBER offices indicate that loans to women have generally been extended for retail sales, restaurants and operation of small service enterprises (tailoring for example), while loans to medium to large scale agricultural enterprises and large bar/restaurants have been accorded to men.

Loan Use

Detailed discussions held by the Assessment Team with CBER Branch Managers in Barentu and Tessenei, as well as individual agricultural related borrowers receiving ERCS loans, indicate that most of the money lent to agriculture has been used to replace productive assets (machinery, irrigation infrastructure, livestock) and get food and cash crops back into cultivation on farms ranging from small to medium and

large scale. The bulk of the money loaned for agriculture related enterprises (70%) has gone to medium and large scale mixed farming operations receiving loans of from N 100,000 to the largest at N 4,0 million). Three large scale mixed farming operations received loans of N 4,0 million and (two at) N 2,50,000 ($250,000 to $400,000)

On farm interviews held with three mixed farming operations receiving ERCS loans indicated that the money had for the most part been expended for getting crops back into cultivation (machinery replacement or hire, inputs and labor), to replenish livestock lost during the war and repair/replace irrigation equipment. In only one case it appeared that loan proceeds had been utilized to replace assets and productive capacity not lost due to the 2000 invasion. In each case, the capital was being used to generate real value added in terms of agricultural production for sale in the domestic market. Among the products being produced on these farms are cotton, bananas, citrus fruits and vegetables for the local market and sorghum. Livestock raising and dairy have also been supported.

Loan Repayment On Overall Portfolio Basis

On the whole, the CBER bankers interviewed in the Barentu and Tessenei branch offices were satisfied with the use of agricultural loans which they extended under ERCS. They expressed confidence that they will get their money back in most cases where it was lent for agriculture.

Examination by the Assessment Team of Loan Collection Statistics on ERCS loans through July 31, 2002, indicates that the bank has collected a cumulative total of N 12,537,702 or 25% of the N 50,972,851 extended during the period August, 2000 to July, 2002. Discussions with the Headquarters Credit Administration Unit indicate that the bulk of the outstanding loans with past dues as of the last quarterly reporting period (6/30/02), or N 29,123,616 of total outstandings of N 42,122,437 (69%) are in the “Pass” Loan Classification Category, or 0- 90 days overdue.

These are loans which are “at risk” of non payment because there are unpaid arrears, but the majority are likely to be repaid within a reasonable period of time with consistent supervision and collection by CBER Loan and Branch Officers. Assessment Team discussions with the Branch Managers in Gash Barka and several of the agiribusinesses taking ERCS loans, revealed that some of the arrearages have been due to poor structuring of the loan repayment terms for mixed agricultural enterprises, which must be set according to cashflow and allow for needed after harvest marketing time to realize a good price on commodities produced. By contrast, N 12,663,972 or 30% of outstanding loans with arrears are classified in the Substandard (90 to l80 days) and Doubtful (180 days to a year) categories. Less than 1% (N 314,847) are classified as “Loss”.

CBER uses the Bank of Eritrea required Loan Classification System which follows, with corresponding loss provisioning:

PASS	SUBSTANDARD	DOUBTFUL	LOSS
0-90 days in arrears	90 to l80 days	180 days to a year	One year plus

.Loan classification is done quarterly using the Branch Loans Status and Balances Report by total portfolio, and can be done by ERCS, EIF and by sector. The practice of lumping loans 0-90 days past due into one category (PASS) is standard for the Eritrean banking system and was adopted as part of the lending procedures for ERCS and EIF. This classification tends to overstate the Portfolio at Risk (PAR) due to the fact that a significant portion of those loans are likely have payments in the 0-30 days past due period, which is technically not “at risk”. However, it was not possible given the CBER reporting system and the manual system in use at the Branches, for CBER to disaggregate these loans, and generate a more precise PAR as of 6/30/02.

A “Pass” loan is considered a “regular loan”, or one for which one or more payments is just past due, and likely to be paid. A “Substandard” loan is one where one or more payments are past due, efforts to collect

have not been successful, and collateral is not sufficient to cover. “Doubtful” loans are those which due to the above reasons are deemed not likely to be recovered. “Losses” are those which are being written off.

Loan Repayment at Branch Level

At the Branch Offices visited (Barentu and Tessenei), the repayment performance for ERCS loans was mixed. In Barentu, 33 of the 127 loans extended (2 6%) had payments of six months or more past due. Some N 2,073,307 ($207,330) in payments were past due 90 days or more out of loans outstanding of N 7,522,192 ($752,219) as of June 30, 2002.(28% of this portfolio). About 43% of amounts due and payable for the July repayment period were in arrears.

The repayment situation at this branch is of concern. While the Branch Manager was confident that the bank would recover at least 50 to 60% of the amounts in default, this Branch suffers from a severe lack of manpower to appraise and supervise loans.

This was one of the hardest hit areas during the invasion. There is no Loan Officer, hence the Branch Manager serves as both Manager and Loan Officer. During the ERCS lending period, he had to visit each project himself, both before and after the loan was made.

From August 2000 through May, 2002, there was no REU branch functioning in Barentu. Hence, none of the ERCS loan packages were screened or processed by REU, increasing the pre credit analysis work required of the bank. Team discussions held with the REU and Branch Managers indicated that communication between them has been poor, resulting in one loan where a bank defaulter was processed and recommended for a loan, before the CBER Branch was consulted for client information.

This CBER Branch Manager wants at least one Loan Officer and a “second chance” at lending under a future rural credit program. He has plans to lend into three underserved areas in his zone, but feels they would do better loan processing in his office than through an REU.

At Tessenei Branch, the repayment situation is markedly better. As of August 31, 2002, 12 of the 123 loans outstanding under ERCS are in arrears (10%). On an outstanding loan balance of N 15,284,193 ($1,528,419) as of August 31, the Branch reported N 2,531,540 ($253,154) in arrears (17%). Given the much better staffing of this branch, or two full time Loan Officers as well as the Manager, and the reasonably close working relationship between Loan Officers and borrowers, it seems likely that this branch will recover the amounts due and payable within a reasonable period of time.

Loan repayment under ERCS has been higher among the trade and services sector clients, who generate regular income from their businesses. There have been higher arrears in agriculture, due in some cases to poor packaging of loan terms vis a vis project cashflow and the bringing of crops to market at low prices. During 2001, CBER notes that agric loans were late or resulted in non payments more than usual due to water shortages, which remain a problem in 2002.

CBER Adherence to ERCS Terms and Policies

Assessment Team discussions with the CBER Headquarters Administration Unit, as well as Branch Managers at the Tessenei and Barantu, indicate that the bank has generally followed the credit procedures and criteria developed by the SBA for the ERCS program. Borrowers have for the most part been able to present verifiable damages from the 2000 invasion, and in most cases observed by the team, loans appear to have been made to replace pre-existing assets and productive capacity.

Loan terms have ranged from two to five years (the program maximum), at an interest rate of 8% pa. Grace periods have been granted for from six to twelve months, based partially on cashflows. Collateral has generally been taken in the form of registered buildings or chattel mortgages on trucks or equipment (insured in the bank’s name). Relatively little use has been made of personal guarantees in branch lending due in part to lack of experience with it. With the exception of Barentu, which was closed during the

invasion and only recently reopened to assume portfolio generated for it under the Acordat Office, at least one Loan Officer has been installed in each branch handling ERCS lending.

Loans made under the ERCS program have been extended largely to existing customers of the bank. This was indicated in discussions with both Headquarters Credit Administration staff and Branch Managers in Gash Barka. The reason for this seems to be the "comfort factor", e.g., bank familiarity with these clients and their business history, requiring less project analysis and posing lower risks. Also, it should be noted that lending under the ERCS has, as originally anticipated in the program design, given a significant number of bank customers a chance to successfully resurrect their businesses so that they can pay off past loans. Branches in Tessenei and Barentu have in fact "frozen" arrears on several loans to war damaged businesses, issuing a new loan under ERCS with the agreement that the borrower would pay off arrears when the business was back to normal operation.

ERCS loans have been extended for the most part without requirement of a business plan or feasibility study. Lending under the EIF has been done on the basis of business plans and feasibilities, for projects over N l00,000.

E. Enterprise Investment Fund (EIF) Credit Scheme

As noted above, the EIF did not do any financing of enterprises under its original program as provider of equity and foreign exchange financing for imports. In part due to the pressures of doing emergency lending under the ERCS scheme, CBER did not began making direct loans to enterprises under the REIP Enterprise Investment Fund Credit Scheme until March, 2001. Using allocated funding of $2,680,000, EIF has during the period of March 27, 2001 through July, 31,2002 (14 months) made 18 loans for a total of N 6,928,624 ($692,286), to enterprises in the agricultural, manufacturing and trade and services sectors (26% of available funds). As of 7/31/02, loans in the amount of $511,686 had been claimed for reimbursement under the REIP.

Loans were disbursed from November, 2001 through July, 2002. Thus far, only 11 of the 18 loans have passed the grace period and are under repayment. As of 7/31/02, repayments of N58,269 ($5826)) had been made on principal, leaving an EIF loans balance of N6,870,355 ($687,035). For some of these, payments have just started as they are mixed agricultural production enterprises on 12 month grace periods.

Examination of the Summary Loan Sheet for EIF as of 7/31/02, and talks with the CBER Headquarters and Branch Managers in Keren, Barentu and Tessenei, indicate that the largest amount of this credit N 5,903,551 ($590,355) or 85% has gone into financing of agricultural related enterprises, with 13% in trade and services sector and 2% in manufacturing (metal working). Trade sector enterprises receiving EIF loans included an electronic repair firm (N32,000), a restaurant and bar (N764,954), a retailer of vegetables (N49,000) and several retail shops (N18,000 to 86,000)

Agricultural related loans extended range from three small loans at N 27,000 to 29,000 ($2700 to $2900) for irrigated farming, to three large ones at N l,500,000 ($150,000) given respectively to a cattle fattening enterprise and two irrigated commercial mixed farming enterprises.

The Summary Loan Sheet for 7/31/02 indicates that 10 of the 18 EIF loans have gone to agricultural related enterprises, ranging from irrigated mixed farming (horticulture and cereals) to a cattle fattening enterprise and a poultry farm. USAID compiled statistics from monthly reimbursement requests indicate that all of the EIF loans thus far have been made to male borrowers.

It is too early to establish a repayment trend for these EIF loans, due to the recent disbursement and grace periods still in force for some of them. The Branch Loans Status and Balances Report for EIF loans as of 6/30/02 indicates that all of the then disbursed loan balances of N 4,449,012 ($444,901) were classified as "PASS" or 0 to 90 days.

Assessment Team interviews with the branches Keren, Barentu and Tessenei indicate that there is a significant demand for EIF credit for irrigated mixed farming, and a real interest on the bank's part in

making these loans. It was also evident in at least one case that the loan extended in late 2001 for initial repayment in June-July, 2002 did not allow for a sufficient grace period for the mixed cropping financed, causing the business owner to ask for an extension of the June repayment to December.

CBER Adherence to EIF Policies and Procedures

Discussions with CBER Headquarters Credit Administration and Branch Managers in Keren, Barentu and Tessenei indicate that the bank has for the most part followed the policies and procedures in making and servicing EIF loans. CBER has lent to enterprises in all sectors, including new and existing businesses. In Keren, most of the loans have been to new customers while in others visited loans are being considered or extended to a mix of old and new.

Projects are being financed at terms of from 2 to 5 years, as anticipated. Thus far, loans extended have fallen within the present program limits of minimum N 5000 and maximum N1,500,000. Repayment schedules have been designed to not exceed six months in non agricultural businesses, and from six to l2 months for agricultural production enterprises.

Interest charged has been within the 8 to 12% range which is CBER's normal policy. There is little evidence of "pricing for risk" within this range, in the branches visited by the Assessment Team. It was noted, however, in the Keren Branch Office visit that loans to customers under the EIF are generally being extended at 8%. This does not cause rate competition with the bank's normal rate for an established business customer (l2%). If the project is backed by a good feasibility study and the borrower is sound, the bank will charge its regular rate of 12%.

As with the ERCS lending, EIF loans are being made with collateral wherever possible, usually in the form of registered building or insurance taken on a vehicle or other chattel. Several loans have been made "clean" to small scale agriculture where the borrower was known, but collateral was not available.

F. CBER as a Lending Institution

The Commercial Bank of Eritrea (CBER) is the country's largest commercial bank, providing a conventional range of commercial deposit and credit facilities. At the end of the second quarter of 2002, the bank's total risk assets were N 2,142,529,000 ($158,705,852). Some 80% of the bank's loans were held within the Liberty Avenue and three Asmara branches. These were largely Asmara based accounts, although the business may be located in another region. By deduction about 20% of CBER's risk assets are branch accounts outside Asmara.

CBER presently offers the following credit products for business, extended largely to known customers:

- Overdrafts used as working capital
- Term loans of two types: fixed asset financing and cyclical restocking
- Letters of Credit via the foreign department
- Letters of guarantee, local or international
- Advances against merchandise, at 60% or 70% of the export FOB

Deposit instruments offered include: current accounts (0% interest), savings accounts (5%) and time deposits (one year at 5.5%, two years at 6%)

Term loans are extended within a very conservative lending policy which is largely collateral based. Discussions with Headquarters Credit Administration Unit staff and branch managers in REIP target areas indicate that cashflow lending is not going on as a matter of policy. Under the REIP, cashflow is now starting to be used as basis for setting loan terms for agricultural production credits.

Loans are negotiated individually with borrowers on the basis of monthly, quarterly or annual repayment schedules, depending upon cashflow. Grace periods vary from six to 12 months, depending on the type of

enterprise involved. Under REIP, 6 months has been the general policy but grace periods of up to l2 months have been given for agricultural production enterprises and some start ups.

At CBER as in other Eritrean banks, very limited product development is being done. Rollover lines of working capital are non existent and lending is based primarily on term loans for investment, construction and overdrafts.

CBER is presently highly liquid and recently started investing surplus liquidity in Treasury Bills paying 2.5% average (less than their deposit interest at 5-6%). During the 2001 operating period, management indicates that about 30% of their loans were to agricultural related enterprises, and they expect that agriculture will represent about that proportion of their total portfolio this year. Although Branch Managers can "recommend" a loan up to a certain limit (N 100,000 or $7400), all loans are approved at Headquarters. Loan approval is done through the Credit Committee.

CBER is operating with 11 branches, including 3 in Asmara and 8 in other regions. Because of a low GOE dictated salary structure and the war related extensive and prolonged mobilization of men between the ages of 23 and 45, CBER remains severely understaffed at the credit officer level, both at headquarters and in the branches. The above factors have made it harder for banks like this one to recruit and train credit officers.

Although the hiring and training of women credit officers was a key sub objective of the REIP project, CBER management indicates that this part of the program has not been implemented, citing the fact that training for women officers was never given by the SDA and "cultural factors" which make it difficult for women to move from area to area. At the same time, women recruits could be trained in a central location like Asmara, and re posted to their home zobas where they know the local people and could work effectively with clients in their own cultural and language context.

At present, the top managers at CBER headquarters have in some cases been brought back out of retirement. According to outside advisors to CBER, the bank retail floor staff is made up largely of young men who are doing their national service, are low paid and lack real motivation to get ahead in the job.

As noted in findings of some of field interviews conducted by the Assessment Team, the manpower availability at branch level to analyze, extend and supervise credits is very limited. Although 20 trained staff returning from the war are in place and functioning (18 in branches and 2 at Headquarters), in most branches the Branch Manager and (on average) ONE Loan Officer have to analyze loan packages and supervise credits, in addition to working with back office functions and other banking responsibilities.

According to Headquarters management, the Client to Loan Officer ratio in branches is 300 (average), and in some cases a Loan Officer may be managing 300 to 500 accounts, including overdrafts, term loans and advances.

Computerization

As noted above, CBER Branches report loan status and classification statistics to the Headquarters Credit Administration Unit on a quarterly basis, classifying all "regular" loans as (0 to 90 days). Outside of Liberty Avenue Branch, which is computerized, the branches don't have the capacity to generate these numbers on computers.There are no working computers outside branches in Asmara. Instead, daily calculation of loan interest, monthly calculation of loan payment information and quarterly reports on loan classification are done through manual compilation of account cards.

Lack of computerization, coupled with limited staff to extend and supervise credits and dependence upon manual processing of loan statistics, makes it difficult for CBER to monitor portfolio, track potential problem accounts and apply specific "pro active" policies to improve credit recovery

Credit Analysis and Lending Capacity

Under the ERCS, as much as 80% of the lending done was to established bank customers. When asked by the Assessment Team why this was the case, the Credit Administration Manager's response was that these borrowers had a "history" with the bank, their businesses and characters were known and the loan packages required less analysis and processing. In the midst of extreme pressure to make emergency loans to in some cases higher risk situations, the bank fell back on the "comfort" factor and taking of collateral wherever possible.

In discussion on why the bulk of the ERCS approved agricultural credit ($ amount) was made available to sizable concessional farms in Gash Barka, the Credit Administration Manager gave three responses, which reveal the importance of the "comfort factor" and collateral.

- The farms had significant assets and could demonstrate more easily than a small rainfed farm war induced destruction
- They were existing customers of the bank and had taken previous facilities (overdraft, term loans)
- They had collateral which the bank knew if could attach if enterprises had trouble repaying

In response to an Assessment Team question as to whether CBER is "pricing for risk" within the bank determined interest range (8 to 12%), management cited the following factors which they "consider" in setting interest rates:

- Collateral
- Financial condition of the business (assets, financial soundness)
- Past relationship with business
- Requirement of a business plan and three years financials (before and projected) for "larger" loans, defined as loans with a "capital" component

Team discussions held with branch offices did not reveal specific evidence of pricing for risk in the extension of ERCS or EIF loans. Discussions held with Headquarters and branch level credit staff indicated that during ERCS lending, CBER has relied heavily upon analysis of loan packages prepared by the REU, doing some analysis but largely verifying figures and key factors in business plans. Headquarters then consults with the Branch Office for their recommendations on the project, borrower and loan.

In response to questioning as to areas where management feels that CBER staff need more training to improve loan processing and quality, Credit Administration management cited project analysis, and specifically agricultural credit analysis. CBER would like to develop one Loan Officer in each branch who is capable of doing sound agricultural project analysis and lending, in addition to working with other loan products. The biggest project related constraint which bank management cited in working with REIP borrowers in agricultural production was lack of applicant knowledge of how to identify and exploit markets, adding that "Farmers cannot be both producers and marketers".

Lack of capacity to do credit and project analysis was also revealed in the Assessment Team's discussions with the Credit Advisor to CBER on the World Bank technical team. Based upon about one year's work with the credit staff, it is his opinion that the present management and credit staff do not have the capacity to do full loan analysis (financial and business plan), but instead rely largely upon Business Plans and balance sheets submitted to them by clients (and where they are involved, the REU).

In his view, bank staff are "not ready" for the project analysis model which the World Bank team anticipates introducing here, adding that credit staff have been introduced to but "have not yet mastered" the simple balance sheet format used to run basic ratios on a business. He added that submitted loan packages and the reputation of the borrower are the basis for analysis of most loans here. He cited needs for further technical help in the credit operations in credit review, loan monitoring and business credit appraisal.

These responses shed some light on why most ERCS loans have been to CBER's existing clients, at known risks and character, and on why the bank seems very much engaged in identifying and attaching collateral.

Credit Supervision Capacity

CBER Headquarters management indicates that while they have a loan supervision policy, they have not had a consistent number of trained staff (credit officers) to carry it out. As noted, in some branches the Manager is responsible for credit supervision as well as back office operations, and is typically backed by only one Loan Officer.

Heavy Reliance upon Collateral

It is evident from all discussions of CBER lending activity that the bank has been heavily dependent upon collateral based lending to reduce repayment risk, in both their normal and REIP lending. Headquarters management indicates that the bank does collateral based lending as general policy and that it uses security agreements to attach the following types of assets:

- Buildings, where title is registered and the bank retains title documents
- Vehicles, which are registered and generally insured in both the borrower and bank name
- Other equipment may be used as security if the bank gets an agreement from the borrower not to remove or otherwise use it and it is insured in the bank's name

Personal guarantees are used for loans up to N 100,000, requiring a third party to sign for the borrower and assume repayment obligations if he does not pay. A guarantee must be backed with saleable assets on the part of the guarantor. This means of securitizing loans seems to be used mainly at Headquarters.

At Branch Offices visited, collateral used is typically real estate (a house for example) for a first loan, or in some cases trucks or cars insured in the bank's name. Personal guarantees did not seem to be used very much, largely due to lack of experience with them.

Branch staff at the REU office in Keren and the Branch Manager at the Barentu CBER office, indicated that bank collateral requirements for loan security are "too stringent" for small borrowers, e.g., requirements which they simply cannot meet. They noted that lack of collateral has prevented some borrowers from accessing loans under ERCS.

While most ERCS loans made under the Barentu branch were non-collateralized, they did require collateral on some. Likewise, the Tessenei CBER branch took collateral to the extent that they could on ERCS loans above N 5000. CBER Keren has been using collateral on larger loans and personal guarantees on some of the smaller EIF loans (N 5000 to N l00,000), where collateral is not available. All of the loan packages awaiting EIF processing at the Keren REU had collateral.

Problems at Branch Level Under REIP Lending

Too stringent collateral requirements was one of the problems cited by Managers of the CBER branch offices visited by the Assessment Team in Gash Barka and Anseba. When asked to describe "what is not working", managers also cited the following

- Inability of Branch Managers to approve loans of under N 100,000 ($10,000) at the zoba level. While this was the proposed policy under the REIP program, all loans are still approved at CBER Headquarters, regardless of size.

- Time-taking process of project screening and "appraisal" by REU (local and headquarters), followed by analysis of recommended loan packages by CBER headquarters with feedback from the branch. Both REU managers and CBER Branch Managers noted significant delays (from 3 to 5 months in some cases) in ERCS processing, causing cost rises for applicants in basic inputs.

- Lack of communication and coordination between the CBER Branch Office and the REU. This is a problem noted in Barentu, where there does not seem to be much communication and cooperation between offices, particularly at the level of REU securing of “client information” from the bank before "loan packaging". Lack of bank consultation on previous credit history has compromised the quality of at least one loan made under REIP.

- Confusion of non-banking and banking roles in the course of processing REIP projects through the REU and the bank. This is especially noticeable at the levels of project analysis (referred to as “loan packaging” under the REIP) and credit supervision after a loan is accorded.

- Under the REIP program guidelines, these roles normally carried out by the lending bank were assigned to REU. While REU and CBER cooperation at these crucial stages has been remarkably good in offices like Keren, there is some evidence that confusion of these roles, lack of manpower and poor communication at some points in the processing has compromised loan quality in other locations.

- Lack of sufficient manpower to carry out the roles and responsibilities assigned to cooperating agencies under the REIP lending programs. Managers of each of the CBER branches visited cited lack of staff as a key constraint to doing a better job of processing the volume of loan requests received (under ERCS and EIF) and providing after loan follow up.

REU staff in the Keren and Barentu offices cited additional areas where the REIP lending program is not working as well as it could be. These included:

- Licensing requirement for small enterprises (loans of less than N 100,000 or $l0,000) which is part of the REIP procedures, but not appropriate for all businesses. This is limiting access to the EIF facilities for clients being assisted by the REU in Keren, where the likelihood of getting the license and the lack of collateral do affect processing.

- Problems in recruiting sufficient staff to provide technical assistance to clients in project analysis and loan packaging and do project follow up. This is in part due to the large numbers going into national service and the fact that while REU job qualifications are fairly high salaries are low.

- Inability to work with the requirements of very small projects submitted by WOMEN, notably projects requiring N 5000 or less. While a significant number of inquiries have come from women with small projects in Barentu and Keren, the “comfort level” and capacity to process them seem to be low within the REU/CBER processing system.

- Lack of participation on the part of Branch Level Officers of REU and CBER in meetings with top management in Asmara, at the level of decision making on project processing and “process”

- Lack of an overall plan or guideline from REU on the basis of which units can do their work planning

Some of these constraints could be addressed in the present project, or in design of a follow on project. In any case, more realistic roles need to be worked out for partner institutions in project development and financing. Policies and procedures need to be more conducive to securing adequate staffing.

Cooperation between Bank and REU

“Processing” is probably a good term for the “loan packaging” which is going on at the REU units visited by the Assessment Team in Gash Barka and Anseba. While some project analysis seems to be done by Project Officer and Branch Manager at Keren, discussions with those staffs in both Barentu and Karen indicate that the following is essentially what is going on when a project enters the REIP process:

- The potential borrower is referred to REU by the CBER office after making a loan inquiry under the REIP, or goes directly to REU.

- The REU Project Officer reviews the applicant's documents and assists him/her with program criteria and completion of the REIP loan application appropriate to the size of project.
- In cases where the project will require a loan of N 100,000 ($10,000) or more, the REU officer informs the applicant that a business plan and feasibility are required, and generally refers the project to REU Headquarters in Asmara for further "analysis", and linkage with private consulting resources which can assist in preparing the feasibility.
- The REU Headquarters "finalizes" the loan package with any required feasibility study and forwards it on to CBER Credit Administration at Headquarters.
- It is generally "analyzed" there at the level of verifying the financials and other information submitted with the business plan.
- The CBER Branch Office Manager is contacted to secure their review and recommendations on the loan package. He can "recommend" approval for loans up to N 100,000.($l0,000)
- Before a loan decision is made, a suitable approach to loan securitization is agreed with the Branch Office.
- The loan is approved by the CBER Headquarters based Loan Committee.
- After the loan is granted, CBER Branch Office staff do the loan supervision.

The process of "packaging" rural investment projects and financing them through the present institutional relationships under REIP introduces some fundamental "disconnects". There is evidence that these are compromising both project and credit quality, causing unnecessary delays in project processing and delaying the day when both financial services and business advisory services can be offered to clients on a "market driven" basis.

The present REIP program is structured in such a way as to confuse the roles of the REU and the bank, assigning inappropriate loan packaging responsibilities to the non banking entity (REU), and delaying the day when the bank will adapt and use the skills required to do sound agricultural project and credit analysis and cashflow lending. This division of roles, combined with severe shortage of CBER credit staff and the "take out" which the REIP loan reimbursement mechanism has provided for CBER as lender of record, has greatly reduced the bank's credit risk and has undoubtedly had some impact upon credit quality and loan recovery under the ERCS.

Findings and Conclusions from Assessment of SME Financing Component of REIP

As noted under "ERCS" and "EIF Lending Programs", CBER has made loans to agricultural related enterprises at all levels of the rural economy, from small farms (up to N 30,000) to medium and large scale ones (N 100,000 to N 4,0 million or $10,000 to $400,000) in mixed farming, as well as to livestock fattening and poultry activities. Assessment Team visits to a number of enterprises using those loans indicate that the financing has paid off in terms of supporting viable agricultural production enterprises which are adding value and supplying the domestic market with cereals, vegetables, fruits, poultry and livestock and dairy products.

It is evident from discussions held by the Assessment Team with both the Credit Administration staff at CBER headquarters and credit staff at branches, that there is a significant and continuing interest at CBER in doing agricultural lending. This is in part engendered by the exposure which the bank is developing particularly in the agricultural production sub sector (mixed farming), and the desire to help existing clients affected by the war rebuild their enterprises and settle past arrears.

Recent lending activity under the ERCS and EIF indicate that CBER's headquarters Credit Administration Unit has taken some risks in order to implement lending programs under REIP and support investment (and reconstruction) in agricultural enterprises. It is also evident that CBER has endeavored to do emergency and EIF lending under extremely difficult conditions. These include the loss of trained credit staff due to mobilization for the recent war with Ethiopia, the interruption of its capacity building program, the war induced closure of offices like Barentu and the loss of substantial loan assets due to war damage to businesses in Gash Barka and Southern Regions.

After the introduction of the ERCS under the USAID "Crisis Modifier Program", CBER was put under intense pressure to make loans to help rebuild damaged business in all sectors of the economy. As noted, it has made 386 RECS loans totaling some $5,0 million and is endeavoring to service and recover them in the face of continual lack of trained credit staff to do credit analysis and regular loan supervision. Discussions with Branch Office Staff in Gash Barka indicate that chances are reasonable that most amounts in arrears on ERCS loans will be repaid

Informal responses by Credit Administration staff to Assessment Team questions on the bank's "comfort level" with agricultural lending, have revealed that CBER may not regard itself as a "long term lender" in the investment financing sense, and that it is probably more comfortable lending to agricultural activities requiring direct financing in the N 30,000 to N 1,000,000 range. This is "down market" from the lending range where Eritrean Development and Investment Bank (EDIB) states that it is most comfortable doing lending to agricultural enterprises, or N 200,000 to N 2,000,000 (with loans to industry ranging up to N 9 million).

It is also evident that CBER credit staff are yet not capable of doing full credit and project analysis on agricultural and industrial projects. Lending at both Headquarters and Branch Office levels is basically collateral backed and influenced by factors including familiarity with the customer, his asset base and prior credit history ("the comfort factor"). The continued lack of full computerization of loan accounting systems at the Headquarters and branch level constrains the bank's capacity to track and service loans for higher rates of on time loan recovery.

For reasons including CBER's conventional lending practices, war induced shortages of trained credit staff and lack of basic skills in credit analysis and supervision, the bank has not been using its considerable liquidity to diversify savings and credit products to meet the needs of the emerging private sector in Eritrea. Also, structuring of the ERCS and EIF loan programs has not provided the CBER with the skills nor incentives to diversify products and attract new clients in the value added sub sectors.

If CBER is going to continue to serve as an effective agricultural lender under USAID supported rural enterprise development programs, the bank will require additional capacity building in credit analysis and supervision, risk assessment and other areas where skills of the credit staff remain weak. Capacity building could begin under the remainder of the REIP program.

CBER has for capacity related and other reasons not been doing the kind of "market driven" lending which would be conducive to attracting and servicing new customers in DIVERSE areas of value added agricultural production, processing and marketing. This plus the bank's traditional and conservative lending practices suggest that CBER should not be the ONLY bank which can be qualified to do investment lending for rural enterprises.

Under any new project in support of rural enterprise development and financing, access to financing resources should be opened to two or more banks, which can work with the risk profile and processing requirements of different segments of the rural enterprise market. Access to funds should be made available to participating financial institutions on a competitive basis, subject to meeting clear criteria as regards sector and maximum loan size, as well as credit quality and minimum loan recovery rate. Further, credit funds should be made available on the basis of risk sharing by the lending bank.

It is also evident from this Assessment that any future USAID project in support of rural enterprise development must make a clear separation between support to "project advisory services" provided by one or more qualified private sector oriented business entities to potential loan applicants, and "banking functions" which are best carried out under the discipline of a formal commercial bank.

Specific Recommendations for Improving SME Financing Programs in Eritrea

Future rural enterprise financing programs supported by USAID/Eritrea should be structured in such a way as to (a) promote competition between two or more lending institutions, (b) induce participating banks to assume more of the lending risk and (c) support development of capable Agricultural Credit Windows

within each participating institution. This needs to be done to improve banking capacity to do cashflow based lending, price for risk, increase the quality of loans and improve responsiveness to the financial needs of enterprises in sub sectors where the growth opportunities lie (domestic and export). Capacity building support to participating lenders should also be structured in such a way as to improve access to financing and business project technical support for Eritrean women entrepreneurs, in sub sectors where they can excel and where the investment is going.

Recommendation # 1

Open Participation in Rural Credit Facilities to Two or More Banking Institutions

Competition is going to be necessary in order to improve loan processing and credit quality under a future rural enterprise development program supported by USAID. In addition, competition between two or more lending institutions which are developing cashflow lending capabilities is more likely to induce them to develop and market credit products more responsive to the needs of a growing private sector.

It is recommended that USAID consider developing and supporting a rural enterprise finance component which makes credit facilities for SME's in the rural sector available to at least two private banking institutions, subject to the meeting of specific program criteria and yearly performance benchmarks. Based upon discussions held with banks and private enterprises, it is evident that two types of financing will be needed to support the growth of viable production and processing enterprises in the Eritrean rural sector in the short to medium term. These are:

- Direct financing in the form of investment credit or loan guarantee facilities (medium to long term)

- A separate line of US$ financing to cover the foreign exchange needs of businesses importing equipment, inputs or spare parts for production

Under any new project, access to financing resources should be opened to two or more banks, which can work with the risk profile and processing requirements of different segments of the market. Access to funds should be made available to participating financial institutions on a competitive basis, subject to meeting clear criteria as regards sector and maximum loan, borrower equity in the project, capacity to repay out of cashflow and the bank's maintenance of a minimum recovery rate on loans accorded. Further, credit funds should be made available on the basis of a reasonable level of risk sharing by the lending bank.

A bank which might profitably utilize credit facilities for financing medium to large-scale agricultural related businesses is the Eritrean Development Investment Bank (EDIB). The EDIB is presently developing an Agricultural Credit Unit within its Credit Department and has been making phased loans to some sizable enterprises in mixed agricultural production, livestock fattening, poultry and horticulture. These have been partially based upon cashflow requirements and capacity to absorb funds. SEE Attachment A for a Summary Profile of EDIB as a lender to rural enterprise.

Recommendation #2

Induce Participating Banks to Assume More Risk

In order to realize greater leverage and impact for its funds, it is recommended that USAID not provide direct capital for participating banks to use in making loans, but provide a guarantee facility which would cover 50% of the bank's risk in the case of default, subject to specific criteria for eligible loans. Such a facility would induce the participating bank to accept 50% of the risk and would serve as an effective incentive to the bank to improve the quality of credit analysis and loan servicing.

Lessons learned from the use of facilities like REIP which have essentially "taken the bank out" once a loan has been granted, indicate that the resulting loans tend to be made to anyone who can meet "project lending" criteria and present a reasonably viable project. This kind of facility has served well in getting

required financing out to local businesses under the ERCS, which was made available at a time when many businesses had lost productive assets during the invasion and were severely financially distressed.

During “normal” lending times, however, these kinds of "low risk” facilities do not encourage the participating bank to do cashflow based lending and to “price for risk”. Further, they do not encourage the lender to do “market driven” lending, by seeking out and trying to service new customers in DIVERSE areas of value added production, processing and marketing with financial products responsive to their growth needs in a changing economy.

While a number of viable, value added agricultural related businesses have been served in the course of extending ERCS and EIF financing, there is little evidence as yet that CBER bank management has as a matter of policy been exploring new market opportunities to lend into the rural sector. Given the bank’s liquidity and need to begin the shift to cashflow based lending, it is not unrealistic for USAID to consider supporting in the medium term a 50% guarantee facility which would induce this and other institutions to take some exposure on loans to private rural enterprise, and at the same time sharpen the skills of credit staff in project analysis and cashflow analysis as part of credit appraisal. Naturally, the boards of this and other participating banks would need to adopt the policy of doing cashflow lending.

One mechanism for providing loan guarantees would be the USAID supported Development Credit Authority (DCA). Designed as a financing tool to be used in addition to or in lieu of grant funding, the DCA requires bank risk sharing. Subject to specific loan eligibility criteria, USAID will under the DCA not cover more than 50% of a lender’s risk, unless the CRB otherwise approves. DCA financing is not used where it is probable that the loan transaction would go through without it, e.g., it is an instrument typically used to guarantee loans made in higher risk environments and in cases where new products or services are being financed through start ups and expansions.

An alternative mechanism would be for USAID /Eritrea to directly provide guarantee funds covering 50% of the risk on loans made up to a program loan maximum, subject to participating banking institutions meeting certain institutional and loan criteria. In this way, the Mission would achieve more flexibility in terms of the ways in which the guarantee could be used.

Recommendation #3

Support Bank Capacity Building through Development of Agricultural Credit Windows

In depth discussions by the Assessment Team with credit department management at CBER and EDIB indicate that if either bank were to participate under a future USAID supported rural enterprise credit facility, their management staff and loan officers would need significant training and technical assistance in doing sound agricultural credit appraisal and loan supervision. It is recommended that as part of any future rural financing component, USAID consider providing grant support for the building of a quality, adequately staffed Agricultural Credit Unit within each participating bank.

Staff at both CBER and EDIB would require a very focused capacity building program over a two-year period. This should take the form of training and technical assistance addressing areas including the following: (a) cashflow based lending, (b) credit analysis for agricultural related production and processing enterprises, (c) credit risk assessment, (d) credit supervision, (e) improved delinquency management and (f) new product development and marketing. Particularly needed will be more detailed farm analysis tools as well as techniques for pro actively managing loan delinquencies to keep them low.

Successful implementation of such a program assumes that management of each bank will be able to freely adopt and implement cashflow based lending as a matter of policy. For CBER, this capacity building could be started under the current REIP and continued under a future project.

Recommendation #4

Separate Banking Functions from Business Advisory Services (Project Preparation)

Lessons learned from this assessment of lending activity and institutional cooperation under the REIP, indicate that under any future rural enterprise support project, banking functions (credit analysis and supervision) will clearly have to be separated from business advisory services (project preparation). It is recommended that this be done by restructuring the present rural business advisory services to provide incentives which will draw private consultants into the market to prepare on a fee for service business plans and project feasibilities, subject to specific quality standards.

Recommendation #5

Condition Financial Services Project Support on Specific Policy Changes

If USAID supported credit facilities are going to be utilized profitably and efficiently in agricultural related financing, participating banks will have to meet certain institutional standards. It is recommended that USAID condition participation of any bank in a credit guarantee facility upon the bank's willingness to adopt the following policies:

- Charging of market linked real interest rates, and pricing for risk
- Regular aging of portfolio at risk (PAR), at least quarterly
- Adoption of pro active delinquency management policies and practices
- Increasing of on time recovery rates on program related loans to a certain minimum standard

It is acknowledged that interest rates are still partially regulated by the GOE, which sets a loan interest maximum of l2%. However, if the recommended program is to succeed in helping to create more profitable, market oriented banks, USAID may have to consider taking on with the government the issue of permitting the charging of positive, inflation adjusted interest rates on project loans.

Recommendation #6

Condition Financial Services Support Upon Completion of Installation of Central MIS System for Banks

In order to improve loan tracking and credit supervision, participating banks will need to have in place a standardized banking MIS like the one being installed by Kindle at the Central Bank. This is being tested and is expected to be ready for operation in early 2003. USAID should condition further rural finance program support upon the availability of that system to all participating banks.

Current Microenterprise Activities

CARE Community Based Savings and Credit Association Project

At present, USAID Eritrea is providing grant support in the amount of $380,000 over l8 months, to assist CARE International in developing and establishing a group based savings and credit for women's income generating activities in three target areas: North Red Sea, Gash Barka and Maekel (Central zone). Target groups are poor women in very vulnerable households, most of whom did not have an enterprise before program support was provided. Project services are being provided to savings and credit groups via two local NGOs (VISION and HABEN), which CARE has been technically assisting to develop and run these types of schemes.

The project goals were to

- Improve the income security of 660 vulnerable households in targeted rural communities through use of community managed savings and credit associations (CSCA's)

- Prove the hypothesis that poor households in rural Eritrea can mobilize their own resources through the discipline of savings and dynamic management of community based organizations, in order to (a) make risk free cash available to households at critical times of the year and (b) diversify household income sources by engaging in new types of income generating activities.

One of the key underlying goals for USAID/Eritrea in providing this program support is the provision of assistance to vulnerable rural households in achieving food security, within an overall strategy of supporting women to develop and run viable micro enterprises. It is anticipated that the income generated and managed by poor women will in turn improve household income security and enable families to meet food requirements, through a combination of production and purchase of basic foodstuffs.

Project Objectives

At the inception of this pilot project in August, 2001, several measurable objectives were established. These included the following:

- Local capacity to establish and manage sustainable community savings and credit services to be developed through the establishment of 22 mature CSCAs
- Households to be capturing savings on a regular basis to cope with cyclical cash shortages and effectively investing in household income generating activities
- National capacity to establish and support community based savings and credit associations to be developed through CARE's capacity building with two Eritrean NGOs

As of the June, 2002 Quarterly Program Update, the Community Based Savings and Credit Program had accomplished the following:

Objective 1 - Build local capacity to establish and manage community savings and credit services developed through establishment of 22 mature CSCA

- 18 out of the target 22 associations were formed and functioning in the target communities, serving 533 members (against a target of 660)
- 13 of the 18 associations were in the development phase, with the balance still in the intensive phase
- 16 of l8 CSCAs were utilizing savings mobilized to provide credit to their members income generating activities

- A total of 284 loans had been disbursed in the amount of N164,815 ($16,481)

Objective 2 - Households are capturing savings on a regular basis to cope with cyclical cash shortages and effectively invest in household income generating activities

- A total of N 178,290 ($17,829) had been mobilized by members of the l8 CSCAs since the project start, or 42% of the target of N 428,400 ($42,800)
- A total of 284 loans in the amount of N164,815 ($16,481) had been disbursed at the end of the quarter, a 214% increase from the last quarter's performance of N 52,525 ($5252)
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Discussions with staff at CARE-Eritrea and Assessment Team visits to TWO groups near Barentu accompanied by VISION staff, indicated that members have been using loans of average N 1000 ($74) to start and capitalize enterprises in vegetable production, livestock, petty trading, small shop keeping, weaving and mixed small scale farming.

More important from a household income security standpoint, the clients served by this program are largely vulnerable women who have been assisted by the program to start and operate micro enterprises outside their homes for the first time. With access to savings and credit, they have been able to establish and run enterprises for which they control income earned and assets.

Most of the women interviewed probably would have had no effective means of starting these enterprises without this assistance. This is a group which doesn't seem to be targeted by other providers in the hierarchy of Eritrean credit institutions (See "Profiles of Other Micro finance Programs below and Exhibit B). This target group should continue to be supported by future USAID funding activities in the micro finance sector, because of the significant contribution of poor women to household food security as well as income security.

Program Beneficiaries

In the CARE project groups, about 60% of the members are women. All of the women are savers, and about 60% are borrowers at any one time. Average group sizes are 15-20 in rural areas and 45 in urban.

The CARE micro lending activity in Eritrea contrasts with that of ACORD, a local NGO which uses a similar village based savings and credit association methodology, but is geared toward the financing of people with existing enterprises. ACORD serves very mixed groups of men (57%) and women (43%), whereas an average of 5 to l0% of the clients in CARE groups are men.

The average loan size in the CARE program is small (N 1000 or $74), but the women tend to borrow more each time with good repayment. According to program field staff, women borrow according to carefully thought out uses for the money, so that they aren't taking more than they can repay.

This borrowing pattern contrasts somewhat with that of ACORD. Here the NGO makes a first loan of N 3500 ($259) to individuals in groups, and then enables them with good loan repayment to "graduate" by formula to individual loans of up to N 10,000 ($740). Under the ACORD model, each loan is approved on the basis of the decision of a Village Loan Committee, on which a representative of the local administration typically sits.

By contrast, the CARE methodology is based upon member managed savings and credit services. The women self organize their groups and decide among themselves how much they will save each week as well as how their savings will be used to make loans to group members.

In the two CARE/VISION groups visited by the Assessment Team, this seemed to generate a strong sense of "ownership" in the group and its activities. "Best practice" with similar methodologies, used in other countries to reach the target group of very vulnerable women, indicates that this cohesiveness and sense of ownership enhances the long-term sustainability of the groups as financial services providers.

The methodology used by CARE with its implementing partners VISION and HABEN is two stage: In Stage One, the group based savings and credit mechanism is established with the following steps:

- Groups of women who know each other well self-organize and mobilize savings via weekly “share” purchase.
- The amount of the weekly savings contribution is set by the group.
- When members reach a certain level of savings, the group begins to make loans to members from this savings pool.
- Group members set the interest rate which is charged.

During Stage Two, successful groups may access outside loan funds. This takes place in several steps:

- After two cycles of group managed credit, with good on time repayment of loans to members, the group can qualify for a matching Revolving Loan Fund from CARE.
- This is provided in the form of an EXTERNAL FUND lent at 0% and repayable by the group.

As of June 30, 2002, five savings and credit groups (CSCAs) had received such Revolving Loan Funds, including three in Gash Barka and two in North Red Sea. External funds provided ranged in amount from N 443 to N 5850 ($32 to $433). The provision of external funds, backed by CARE training in group and funds management, has given poor women an added experience in resource management and repayment of funds which they don't own.

Loan Terms and Repayment Rate

Loans under the CARE scheme are extended to members within the groups at the rate of l0% per month, for terms of generally 3 to 4 months, as set by the group. The current loan recovery given by the staff was 98%.

Impact of the CARE Program at Household Level

On the basis of numbers alone, a program like that of CARE with VISION and HABEN may not seem to be having a great deal of impact (at 560 clients in l8 groups as of August, 2002, using small amounts of credit). The real impact here is the strength of the methodology used to reach very poor women, who are the key to helping vulnerable households reach income security – and ultimately, food security in the event of a crop failure - with the means to save and access credit for income generating enterprises.

Strengths of the Methodology

The Assessment Team interview with CARE-Eritrea program staff, and field visits to two savings and credit groups managed by VISION in Barentu, indicate that the CARE methodology is effectively reaching the target group of very poor women in rural zones, with few economic options and significant influence over the economic welfare of their households. Several strengths of this methodology suggest that it could be replicated with significant impact in other areas of Eritrea. These include the facts that:

- The group managed scheme “fits” well with the culture, based as it is upon the informal "equb" community savings club.
- The methodology enables women to take "ownership" of the group and manage the self-financing of their economic activities. As note, "best practices" in micro finance today indicate that self-managed savings and credit schemes generate greater sustainability in the long run, whether donor support is there or not.
- The methodology builds a basic savings habit among very vulnerable women and households which didn’t have financial assets before.
- Having gained some economic empowerment, to the point where they not only earn but control income from an enterprise, women can accept and link their households with other social services (improved child survival, family planning, etc.), which can be delivered to them in groups.

- Also important in the Eritrean context is the fact that the beneficiaries are not only vulnerable women but include a significant number of displacees from the recent war and household heads.

Weaknesses of This Micro Credit Scheme

Limited observation of this scheme by the Assessment Team reveals two potential weaknesses. The first is the potential for limited impact upon growth of successful micro businesses if an individual lending product is not introduced within a reasonable period of time (five to six successful repayment cycles in group).

Micro finance "best practices" indicate that an individual loan is generally higher risk and typically does not carry a group guarantee. Also, the move from a group-based credit product to an individual loan is a substantial one, socially and economically, for clients in this target group. In response, an individual loan product should not be introduced too fast nor without adequate risk management measures. It is, however, a product which CARE should explore in any expansion and consolidation project, so that women with growing economic activities can be served with economically productive loans.

A second weakness in the present scheme is lack of targets for scaling up. Clearly the project was proposed for funding by USAID as a pilot based upon pre-agreed targets for client impact and CARE is endeavoring to meet the client impact target (660) by EOP in January, 2003. As part of any application for extended funding for an expansion and consolidation phase, CARE should specifically set annual targets for scaling up clients among poor women and vulnerable households, in the present areas as well as future zones in Eritrea.

Plans for Future Development of this Program

CARE program managers indicate plans to expand the group managed financial services program to other areas of Eritrea. They have also given consideration with their local partners to setting up an APEX FACILITY for cross-funding autonomous savings and credit groups, perhaps organized in the form of village banks. This kind of future planning cannot be undertaken, however, until a program has reached a certain scale and rate of annual client growth.

Under the present pilot, CARE has been offering business advisory services to women in their groups, e.g., training in setting up a micro enterprise, simple accounting and funds management. Building on this experience, CARE is looking at opportunities to help women expand and strengthen sub sectoral activities in agriculture – in areas where they want to go and can contribute to economic growth. Potential opportunities include:

- Poultry - With focus upon five villages where CARE is lending are now participating in the DANIDA/MOA established poultry training program

- Animal fattening for feast days, beginning with goat raising which women have started themselves)

- Dairy cow raising

These kinds of market activities carry the potential for linking women's income generating activities to providers of inputs and vital technical services, and eventually helping to "mainstream" women in the larger economy.

Conclusions: How Impact of the CARE Model Could be Improved

Impact of a model like that used in the Community Based Savings and Credit Program could be improved in several ways during an expansion and consolidation phase. Improvements which would enhance performance and impact include the following:

- Development and implementation of a Five Year Business Plan, with specific annual targets for SCALING UP the impact of the program in terms of (a) numbers of CSCA members reached with

financial services, (b) average loan size, (c) annual portfolio increase (credit growth) and (d) numbers of sub zobas reached with savings and credit services.

- Calibration of those annual targets to generate credit growth rates which exceed the official rate of inflation.

- Development of a baseline indicating status of program beneficiaries at the beginning of the expansion phase, according to key demographic indicators (e.g., capacity to save, ownership of productive assets, key improvements to dwelling, capacity to pay basics like school fees)

- Use of that baseline to measure beneficiary status against the baseline at least annually

- Conducting of an impact evaluation in the fifth year, measuring key impacts upon both the borrower's household and the enterprise.

Recommendations

Based upon measurable results achieved according to key project objectives, and Assessment Team observations of impact upon sample group members of the CARE credit scheme, it is recommended that USAID/ Eritrea extend support to an initiative like that of the Community Based Savings and Credit Association Project. Grant funding should be made available for expansion and consolidation of this kind of approach to extending basic financial services to the target vulnerable household group for a period of up to five years. Such support would allow this kind of initiative to scale up to reasonable annual growth rates, reach many more beneficiaries with services and achieve operating sustainability.

The primary objectives of USAID grant support to such an initiative should be to (a) expand services to reach more poor women and vulnerable households with the means to achieve income and food security, (b) establish an increased number of self managed savings and credit associations (CSCAs) as vehicle for extending and managing grassroots financial services and (c) strengthen the capacity of local implementing NGOS to reach the very poor and provide services to other organizations in establishing and running a similar, tested model.

At the level of the group based credit product, grant support should be conditioned upon the initiative's achievement of pre-agreed annual and End of Project targets including

- Numbers of poor clients reached
- Numbers of CSCAs in place and extending financial services to members
- Amount of savings mobilized
- Amount and number of outstanding loans

Key targets should be set for annual growth rates in outstanding loans and for achieving operational sustainability within the Life of Project (LOP).

Grant support should extended to a qualified PVO/NGO partnership to cover basic staff, equipment and technical costs of extending such a model in field. Subject to the grantee's achievement of key performance indicators by the end of Year Four, it is recommended that grant support be provided to the PVO/NGO partnership to do the following:

- Formalize established savings and credit associations (CSCAs) into village banks or a similar credit delivery mechanism
- Develop a framework for linking such autonomous, self managed village banks in a federation which could perhaps in a later phase be served by an Apex Facility
- This would be designed to mobilize excess savings capital from within the system and channel these funds to deficit areas in order to meet effective credit demand among poor households.

Because of time constraints placed on this Mission, the Assessment Team had limited exposure to the CARE Community Based Savings and Credit Program, e.g., one meeting with staff and two site visits to credit groups. This degree of exposure did not allow for a reasonable capacity assessment on CARE staff themselves and the partner (VISION) whose two groups were visited and development of specific capacity building recommendations above and beyond weaknesses addressed above.

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Profiles of Other Micro Finance Programs

Several other micro finance initiatives are providing savings and credit services to rural and urban Eritreans using the group based and individual lending models. While they are not currently providing services via activities funded under the Mission's IO2 and IO3, their activities in micro finance are significant and are briefly profiled below. These include: ACORD's Savings and Credit Scheme, the Micro Savings and Credit Program (formerly managed by the World Bank supported Eritrean Community Development Fund - ECDF) and the National Union of Eritrean Women (NUEW) credit program.

ACORD

The ACORD Savings and Credit Scheme began in Eritrea in l994, as a vehicle for establishing a financially sustainable and community managed credit and savings scheme which would enable the rural poor in Seraye (Southern Zone) to improve their household income and general standard of living via savings and credit for micro enterprises. After initial success in the Southern Region, the scheme was expanded to the Maekel (Central Region). In the near future, ACORD plans to extend services to the Gash Barka and Anseba areas.

At present, the ACORD scheme has eight village banks in place and fully functioning, with plans to have 16 in place by the end of 2002. Some 11,000 individual clients have been reached, in 3300 savings and credit groups of average 3 to 4 members. As noted above, 57% of these clients are men, and 43% are women. As of July 2002, the outstanding portfolio was N 15,0 million ($l,500,000 at an average exchange rate of N10/$l). Savings of N 3,0 million ($300,000) had been mobilized and was being used for lending by the savings and credit groups.

Loans accorded were used for several purposes. About 68% of the credit went to support agricultural activities (inputs, irrigation systems, goat raising, poultry), and about 25% was extended to trade and services enterprises. Five to10% of the loans went to "miscellaneous-other" (unspecified).

ACORD's primary vehicle for delivering savings and credit services is a self-selected group of 3 to 4 persons. These primary groups in turn make up a Village Bank serving the local community (80 to l50 persons). The program is overseen by a Regional Advisory Committee which includes a zoba level official and representatives (regional level) of key ministries. Loans are approved at the community level by a Village Loan Committee, which manages available savings and credit funds.

The target group for the ACORD scheme is somewhat "up market" from that of CARE. The ACORD clients are for the most part individuals with existing enterprises which they wish to expand. The present loan sizes are considerably higher than the average CARE program loan, at N 3500 ($259) for a first loan to an individual in a group, ranging up to N 10,000 ($740), the loan maximum for an individual loan to a borrower who has reached the eighth cycle with successful repayment.

Loan recipients are expected to save a certain amount of the loan prior to receiving it. This is called "collateral" and is used to make loans to group members and individuals. For the first loan, 10% savings is required, for the second, 15%, etc.

The primary groups of 3 to 4 serve fewer members than do the primary savings and credit associations used in the CARE Scheme, which as noted serve 15-20 in rural and 45 in urban areas. However, a larger village bank (average 80 to l50 members) is the vehicle used to extend loans to groups in the ACORD scheme.

The ACORD model does not specifically focus upon building of self managed group based savings and credit services in the way that the CARE model does. ACORD's program mobilizes group savings village wide, which are then used to extend loans to small group members and individuals via village level loan funds. Loan decisions under the ACORD model are made by the Village Loan Committee, whereas under the CARE program these economic decisions are made by women themselves, managing their savings and loan funds within the group, eventually with some external funds from CARE.

Interest and Repayment Terms

ACORD loans are extended at l4% pa for terms of 8 months (small individual loans), up to 18 months for most production activities and 24 months for oxen loans. Repayments are made monthly on the declining balance. The repayment rate at the end of 2001 was 96%, according to Asmara based staff.

Future Plans for ACORD Program

ACORD's future plans include program expansion into new areas and eventual organization of the village banks into a federation or APEX structure.

Comparative Sustainability

Experience in other countries with similar savings and credit mechanisms, indicates that the CARE type model is likely to be more sustainable and cost effective over the long term, IF the local implementing partner can be brought to the point of scaling it up at sustainable growth rates. The level of group cohesiveness and "ownership" observed in testing of the CARE model indicates that if donor funds were not available tomorrow, the groups would for the most part probably survive and continue to deliver services to their members.

The same cannot always be said of village banking models where loan decision-making and funds management are done outside the group and/or with the participation of local officials, e.g., the potential for political influence on decision-making is always there. At the same time, any community based savings and credit model must if it is going to be sustainable, demonstrate the capacity to scale up at annual growth rates in loans outstanding which beat the cost of inflation and generate interest income covering all known costs.

ECDF/MSCP

The Eritrean Community Development Fund (ECDF) was originally designed as a savings and credit Pilot program under the World Bank supported Recovery and Rehabilitation Program for Eritrea. Started in mid 1996, this program targeted the rural poor, with special emphasis upon women, in war and drought affected areas. This Grameen Bank credit delivery model was adopted to mobilize savings and extend loans to individuals within small self selected groups, which would in turn make up larger Villages Banks. The pilot was first tested in Asmara and the surrounding Central Region, although all regions of the country were targeted.

Until the end of 2001, the savings and credit component or Micro Savings and Credit Program (MSCP) was part of the ECDF. With the end of the original ECDF program in December 2001, the MSCP was moved to the Ministry of Local Government, where it now operates as an independent entity.

The program target was to establish 25 Village Banks in selected areas in five regions over five years. The methodology used was the following:

Tier 1 Solidarity Groups

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Self selected groups of 3-7 members are assisted to form at village level, based upon close knowledge of each other and common economic activities. Ten groups form a village bank. Group members cross guarantee each others loans.

Loan sizes accorded under this program range from N 1000 ($74) minimum loan in the first year to N l0,000 ($740) loan maximum in the 6th cycle. Loan sizes are increased each cycle with on time repayment according to a program set loan increase formula.

Tier II – Large Loans to Individuals

At the Tier II level loans are made to individuals in amounts ranging from N 10,000 ($740) to maximum N 100,000 ($7407). Loans to individuals are accorded without a group guarantee, but require a co signer. This is a moral guarantee often given by a wife or husband.

The loan is extended for use as working capital. A feasibility study is required for loans at this level, and 20% of the project cost must come from an investment by the borrower (in the form of savings or fixed assets).

Loan Targets Achieved

Tier 1 Market Impact

As of June, 2002, 155 Village Banks were in place and functioning. These were serving 11,165 clients, of which 38.4% were women, in 11 regions of Eritrea. Program promoters were working in 46 of 59 target areas to expand and consolidate the program. Overall program target was 13,500 clients by 2001 At 12,084 as of August 31, 2002, the program had met 80% of target.

Each Village Bank represented a cluster of average five villages. At five villages per Village Bank an estimated 775 villages was affected. Out of about 2500 villages in Eritrea, this left considerable room for expansion into the micro finance market.

Tier II Market Impact

At Tier II, or individual borrowing level, some 1019 clients were being served with loans as of June 2002, of which 34% were women. Program staff indicated that the % of women served has been lower than that in other micro finance programs due to “cultural practices which keep women from traveling far from home in some regions”.

Sectors where MSCP is Lending

According to staff, the bulk of this program’s loans are going into agricultural production, small manufacture and trade sectors. There is no sectoral limitation on lending.

Loan Terms

For First Tier loans, the repayment period is minimum three months to maximum 12. For Second Tier loans it is three months to 36 months. Payment is made in monthly installments on the declining balance.

Interest Rates

A 16% pa interest rate is charged for First Tier (Solidarity Group) loans. A 16% rate is nominally charged to Second Tier (Individual Borrowers) but with a rebate of 2% with good repayment. Neither rate is a real one at 16% official annual inflation.

Staff response to the "real" interest rate question was that MSCP has thus far been a “social program” designed to test a viable model for reaching the very poor; and that with an established methodology and

client base, they can move in the future to raise rates. The MSCP rate compares with the rates charged by the informal moneylenders (Haretta) at 30 to 100% for short-term cash loans.

Repayment Rates

According to a MSCP Loan Officer, the annual recovery rate was about 96% before the 1998-2000 war. This dropped to 92% at the war's end. He indicated that it is presently 96% on a total portfolio basis.

Sustainability Ratios

The Loan Officer provided the Assessment Team with the following rates (which could not be verified in the time given): operational sustainability 147% (basis of operating expenses only); financial sustainability 78% (including cost of funds and Loan Loss Reserve).

Savings

Savings mobilization is a constraint for the MSCP, as it cannot legally mobilize and manage savings. Mandatory savings mobilized from village level groups are placed in CBER in each village bank's name. The program doesn't have access to them except to reimburse a default.

Program inability to mobilize and manage private savings, and the lack of self management at small group level in terms of making basic savings and credit decisions, will have implications for the long term sustainability of this model if and when donor funds run out.

Competitive Strategy

ACORD is the biggest competition in MSCP areas, at ll,000 clients. Both operate a loan option which specifically targets individuals. The MSCP program avoids villages where ACORD has a Village Bank set up, but will go into areas where there are significant numbers of unserved villages. MSCP is serving six regions now, whereas ACORD is presently only in Mekale and Debub

National Union of Eritrean Women (NUEW) Credit Program

Since 1995, NUEW has been operating a credit program for women in five zobas. Loans are extended to individuals for direct repayment to NUEW (not via a group), and have been used to finance a variety of activities, including small farming, basket weaving and small livestock raising.

According to NUEW staff, loans have been extended to 3000 women in five zones, and loans outstanding are presently N5,0 million ($500,000 at N10/$1). The loan recovery rate given was 85% (average from l995 to present). Where a borrower is unable to repay, the program "forgives" the unpaid balance and makes a new loan. Loans are being made at 12% pa.

Under its Economic Livelihoods Support Program, the NUEW is also running a pilot credit scheme for financing the income generating activities of women in groups engaged in horticulture (vegetable and fruit growing). Under way for one year, the program has been providing in kind loans in the form of seeds and equipment to cooperative village level groups of 8 to 14 women (average 2 hectare plots). The village administration provides the plots, and women will be required to repay in several installments after two years. No figures were provided in terms of number of clients and groups served.

For comparative statistics on clients served, loan sizes, interest rates and recovery rates for each of the above micro finance programs, see Exhibit B.

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Cross Cutting Issue: Enterprise Development and Gender

No program for rural enterprise development and financing can truly serve the country without taking into consideration the substantial value added by women-run micro, small and medium sized enterprises. It is common knowledge in the development field that women predominate in certain sectors, notably small scale farming, retail shop keeping and petty market trading. Women also play critical roles in producing and getting major domestic agricultural products to market, particularly vegetables, dairy, poultry and small livestock for sale.

Women provided with the means to finance a micro or small enterprise are more apt to take a prudent approach to borrowing, e.g., apply only for what they can use and repay. They tend to invest their income in basic needs of the household, and make better decisions regarding food security.

Women are also better savers than their male counterparts and are likely to invest them in ways which build the family's productive assets faster. For all of these reasons, it is important that USAID support rural enterprise development programs which assist women in not only financing "conventional" subsistence activities, but also provide project technical services and financing in such a way as to enable women to move upward from just income generating activities to invest in productive assets in growth enterprises in the sub sectors where the investment is going, e.g., dairy and poultry, livestock fattening, production of cash crops as examples.

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EXHIBIT A

Profile of the Eritrean Development and Investment Bank (EDIB)

The EDIB is a Government owned investment bank. It is a former branch of the former Agricultural Development Bank of Ethiopia. With the coming of independence in l991, GOE was left with a dilemma as to what to do with the holdover bank and its assets. At the end of l996, under proclamation # 91996, EDIB was established and recapitalized as a l00% Government owned bank, charged with making investment loans in medium to large scale projects in the agricultural, manufacturing and mining/construction sectors. EDIB began operations and began lending in l998.

Recent Loan Activity

From mid l998 through the end of 2001, EDIB disbursed some N 90 million in loans ($9,000,000 at average rate of N10/$1), of which (by dollar amount)

20.3% went to the agricultural sector (food production, horticulture, livestock, milk products)
33.8% was extended to the manufacturing sector
18.8% to the mining and construction sector (stone quarrying and marble)
17% to hotels and tourism

An illustrative list of these loans includes the following:

Mother Poultry Farm	N 2,143,242
ERE Farm – Horticulture	N 603,000
Cattle Fattening	N 250,000
Dairy Farms (10 loans)	N 200,00- to N 1,500,000
Ginda Horticulture	N 943,000
Akorda Farm Mixed Agriculture	N 1,9 million
Soap Factory	N 2,7 million
National Edible Oils Factory	N 7,5 million
Sweets Factory	N 7,6 million
Marble products	N8.7 million

EDIB's Single Exposure Limit is N 9,0 million or 20% of its capital of N 45,0 million ($4,500,000)

EDIB management wishes to do more lending to the agricultural sector. In preparation, the bank is developing an Agricultural Unit within the Credit Department staffed with 4 Loan Officers, out of a total of 7 Loan Officers in Asmara. The bank has recently opened two branches in Mendefara and Barentu, and staffed each with two loan officers. There are plans to open a branch in Massawa in 2003.

EDIB's short to medium term objective is to recruit, develop and train agricultural specialist Loan Officers in three areas (Akordat, Keren and Massawa). The present product mix for this investment bank is as follows:

- Term loans (2 to 5 years) for capital investment
- Working capital credits rolled into term credits, repaid as part of one amortization schedule
- LOCs to established customers

While EDIB is not presently a deposit institution, the bank plans to offer clients current accounts and overdrafts for business by 2003, with GOE sanction.

Lending Policies

EDIB has developed and is applying lending policies which appear sound and reasonably well adapted to higher risk agricultural lending. As part of its overall Lending Policy, EDIB

- Requires a feasibility study requested for EVERY PROJECT
- As well as a business license for industry level projects
- Releases loans to mixed agriculture projects in PHASES, according to proposed loan uses and the completion of key stages in farm development and equipment acquisition (four stages typically)
- Releases a check to supplier for machinery (in kind loan to borrower)
- Requires pro forma invoices (minimum of 3) for any machinery proposed for financing
- For construction projects, has estimated cost of building reviewed by staff Engineer, as well as construction permit and plan
- **Doesn't allow a borrower to take TWO LOANS from TWO BANKS**
- Takes insurance on equipment already owned by borrower as well as equipment to be financed, in the bank's and borrower's name with bank first right of claim
- Takes collateral on all loans – most at l00% or more

Loan Term Policy

Maximum loan term granted has been 10 YEARS for a tourism/hotel loan. Agricultural loan terms for projects involving tree crop horticulture receive up to seven year loan terms.

NOTE: For each of the tree crop loans , the bank requires at least one other source of consistent income (vegetables for example) so that loan repayment can begin after a grace period of l -2 years. During the grace period, interest is paid. These loan terms address fact that for first four years, the owner will have only expense in citrus.

Interest Rate Policy

EDIB presently charges 9%, a policy set at the bank within the GOE set l2% lending maximum. This was set in part to "compete" with CBER's 8% loan rate. In contrast, Housing Bank is charging 8 to l2% depending upon loan type and term. EDIB management realizes this is a negative rate of interest and plans to increase rates by the end of this year.

Current Loan Portfolio

As of 6/30/02, total outstanding loans were N 75,600,000 ($7,560,000 at average rate of N 10/$1). The Loan Recovery Rate (end of 2001) was 70% on the basis of original loan terms and 83% when loan prepayments were taken into consideration. The Loan Recovery Rate (end of June, 2002) was estimated for the Assessment Team by their Financial Accountant at 60% (a l0% drop since the end of the year).

Reasons for Increase in Arrears Since December, 2001

Reasons given for the increased arrears included the cases of five large agricultural (mixed farming) enterprises which have asked for extra time to repay their mid year installment, and are proposing to make two installments in December 2002. One of these businesses is an agro industrial complex which needed more time for planting after late rain arrival, mainly a problem of water availability.

The EDIB Credit Manager feels confident that the bank will get their money back and that these loans will go back on track by end of December, 2002. The bank is setting up an Inspection Unit, which will be staffed by two Loan Officers (one for agriculture and one for industry), in order to increase the Loan Recovery Rate and will increase site visits to projects in arrears.

Sub Sectors of Interest in Agriculture

EDBI is interested in doing more lending to the following sub sectors:

- Horticulture
- Dairy
- Poultry
- Cattle fattening
- Fisheries in Massawa and the coast areas
- Sesame and other seedcrops
- Irrigation systems backed by dam construction

Foreign Exchange Problem

Like other banks in the Eritrean market, EDIB frequently cannot make a loan in foreign exchange, often having to provide Nakfa cover and send the client to the market. This Credit Manager felt that a separate loan facility for the foreign exchange portion of an investment loan would be much needed in this market.

Potential Annual Need for Foreign Exchange Facilities at EDIB

At present, management estimates that about 50 to 60% of the bank's funding requirement needs to be in foreign exchange, to cover imports of customers for items including:

- Agricultural and industrial machinery
- Day old chicks
- Construction machinery
- Packaging for dairy and fruits

The bank has 104 active loan clients, of which more than 50% are in agriculture related activities. Total loans outstanding in agriculture are N 19 million ($1,900,000 at N 10/$1) or 25% of N 75,6 million ($7,560,000) in total loans outstanding. At N 19 million ($1,900,000) in outstanding agricultural loans x 50%, an estimated foreign exchange requirement for agricultural lending this year would be N9.5 million ($950,000).

EDIB Identified Needs for Capacity Building

In order to improve credit quality and the recovery rate, EDIB would like to receive added training in project analysis for agricultural related projects and farm analysis.

EXHIBIT B

Comparative Statistics and Market Segmentation for Active Micro Finance Intermediaries

	Clients	Loan Sizes	Loans Outstanding	Interest	Repayment
EDIB	**104**	**N 100,000 9,0 million**	**N 75,6 million**	**9%**	**60%***
CBER/ ERCS	**386**	**N 5000 to 4,0 million**	**N 50,972,851**	**8%**	**33% on time (est.)****
ACORD	**11,000**	**N 3500 –10,000**	**N 15,0 million**	**14%**	**96%**
MSCP	**11,165**	**N 1000 – 10,000 N 10,000-100,000**		**16% 16%**	**96%***
CARE	**533**	**N 1000 (avg.)**	**N164,815**	**10%/mo.**	**98%***
NUEW	**3000**	**Unknown**	**N 5 million**	**12%**	**85%**

- **Statistics given are as of 6/30/02**

**** Estimated loans 0-30 days overdue**

ANNEX F

Economic Growth and Export Opportunities in Agriculture - by Warren Becker

ANNEX F

1. Economic Growth and Export Opportunities in Agriculture

A. Hides and Skins

Overview

Eritrea has a large livestock population including about 4.7 million goats, 2.2 million sheep, and 1.9 million cattle. In 2001, approximately 1.0 million goats, 336,000 sheep, and 210,000 cattle were slaughtered (this estimate appears be very conservative).
Cattle hides and goatskins produced in the highland areas are of particularly good base quality. Sheep are rarely sheared for wool thus giving particularly soft leather favored for the production of high value items such as gloves.

However, poor animal husbandry results in substantial skin damage from crude branding, tick marks, scars, and scratches – barbed wire scratches are less of a problem. The majority of animals are slaughtered in the fields, at the farm, or at home using very basic methods. The need for care in flaying is not understood nor is the need for speed appreciated in contacting one of the 145 licensed collectors. Accordingly, damage from husbandry and slaughter, inefficient flaying, slow collection, poor drying and salting, casual storage, and slow transportation causes the loss of more than 30% of collected rural production and quality degradation of the balance. The majority of skins are not collected at all. Some are dried and burned as fuel, used for building beds and furniture, or discarded. Until the recent border crises, there was substantial smuggling to adjacent markets of raw hides and skins.

In major urban areas, abattoirs use slaughter slabs and sell hides in their wet form to the tanneries. Accordingly, defects and losses are much lower than with rural or urban home slaughter.

Neither collectors nor farmers/ranchers/households have incentives to make the effort required for product quality. Tanneries purchase in job lots generally distinguishing only between highland and lowland skins. Little attempt is made to pay different prices for different qualities of skins.[i] [ii]

Capacity problems were highlighted during an August 2002 visit to the Petros Araya Tannery (General Manager is a second generation tannery operator and Chairman of the Eritrean Tannery Association). This small tannery has a single work-shift capacity of 3,000 sheep and/or goat skins per day – to the wet blue stage (preserved, not tanned). They can also process 200 cattle hides to the same stage. The tannery is currently operating at less than 40% of this capacity due to a lack of labor. Most machinery is old but in reasonably good repair. They lack the tanning and finishing capacity to further process wet blue hides to a higher, value-added, finished leather stage for more than a portion of the local market.

Local Market

1998 local figures show total sales of US$1.3 million with 3% as wet blue (preserved) hides and pickled (brined) skins and 97% as finished leather.[iii] Local wet blue sales are probably inter-tannery.

Tannery production of finished leather is near capacity and the local market absorbs all but a small fraction of tannery production. While it may be tempting to add value by increasing the production of finished leather, this would require large capital investments for equipment repair, machinery upgrading, and the installation of newer technology machinery (with resultant longer term training requirements) and should be viewed as a longer term goal. In the interim, leather-using, export driven factories (garments, shoes, accessories, luggage, etc.) should be encouraged to obtain the most suitable leathers for their clients from abroad by choosing from the best available worldwide. This would best support their international competitiveness.[iv] The limited availability of foreign exchange could be overcome by drawback arrangements with their clients. That is, final clients would arrange the purchase of hides to be imported into Eritrea under a drawback law/proclamation (encouragement of legislation may be required). Products would be manufactured and exported, and any collected or due duties would be refunded or credited. This arrangement has apparently been used for importing specialized packaging materials for the export of agricultural products.

Tannery trimmings and scrap are sun-dried and sold into the local market as fuel.[v]

Export Market

1998 export figures show total sales of US$2.4 million with 96% as wet blue (preserved) hides and pickled (brined) skins and 4% as finished leather.[vi] Total world exports of hides and skins were more than US$5 billion in 1994. Eritrea's 1998 share was 0.05% of this market. Small exports of specialty leathers are largely to Italy, Russia, and Far Eastern markets.

The tannery industry is one of the few Eritrean businesses with past experience in exporting to non-Ethiopian markets. Currently, 70% of wet blue hide exports are to Europe, 20% to China (including Hong Kong) and 10% are to the United States. These exports are made via Massawa by sea in non-refrigerated containers loaded at 15 to 16 tons per container. Forty-foot container value ranges from US$80,000 to US$100,000 for grades one through three to US$50,000 to US$60,000 for grades four through five. Special packing requirements for the European and American market are understood and have been implemented utilizing locally produced materials – hessian sacking (woven in Asmara) and plastic sheeting. The Eritrean Leather Association has formed a productive association with the American Leather Association and has attended the 2001 Miami trade fair under USAID programs. AGOA certification of Eritrea is underway.[vii]

Current labor distribution in the tannery industry seems to give men the machine operator positions and women the handling and packaging jobs.

Present market demand for wet blue hides (with little marketing effort) is for more than twenty containers per month of cattle, goat, and sheep hides while current exports are equivalent to around three per month. The chairman of the Eritrean Tannery Association expressed satisfaction with the profitability of the production of wet blue hides for export.

Potential Actions and Results

Tanneries are heavy users of working capital. Skins are purchased from collectors for cash (US$2.0 million in 1998) and processing chemicals must be imported (US$650,000 in 1998)[viii]. While local sales of finished leather can realize reasonably prompt payments, some wet blue hide exports can require months until cash inflows are seen. However, excellent short-term results would be realized from export financing and/or export inspection services satisfying customers' letters of credit. Increased cash flows would allow investment into the absorption of substantial numbers of mustered out military as well as increasing employment from current labor pools by more innovative recruitment and work scheduling. Few tannery labor positions require extensive training. Current plant capacity, while in some cases verging on obsolete, is serviceable with repairs – especially for the production of wet blue preserved hides. Export financing would allow the importation and/or domestic fabrication of spare parts and/or the importation of used equipment. Current market demand coupled with increased labor, multi-shift operations, and modest capital investment could increase export sales of wet blue hides from US$2.4 million to US$15 million in the short to medium term and US$30 million with the importation of raw skins from surrounding nations. Increasing the quality of raw hides would add to these figures.

There are substantial opportunities for increasing the quality and the quantity of raw hides. There are also opportunities for increasing value by better grading, classification and selection of hides. Short and medium term results can be obtained quickly and easily through a targeted campaign to persuade the tanneries of the advantages of differential pricing for raw skins based upon quality. The second stage of this campaign would be to educate the collectors and abattoirs. Finally, a public information campaign would be implemented to educate farmers/ranchers/households on how to achieve skin quality and accordingly get more for their skins. Radio campaigns, poster placement, and workshops by the Minister of Agriculture at the zoba and sub-zoba level would be typical methods. A simple example would ear marking or tagging rather than large, crude branding. Differential pricing based on quality (freshness, scarring, drying/salting, etc) would reinforce the educational campaign. Transportation availability for the hides and for the salt from Massawa should be evaluated and adjusted by an incentive system. Seed money for the educational campaign may be required but the bulk of the financing should be encouraged to come from the tanneries and the salt producers – the beneficiaries. Long term; after quality differentiation is in place, wastage is reduced to acceptable levels, larger percentages of available hides are collected, and larger scale export clients are established; further expansion can be achieved by the importation of crude hides from surrounding nations such as Sudan, Ethiopia, and Djibouti.

Selective marketing could allow upgrading finished leather value from current tannery facilities currently in place by, say, dedicating one small tannery or department of a large tannery to the production of finished specialty leathers. For example, successful trials have been conducted with shark, tilapia, and ostrich among others. Small species leathers are quite valuable in the

leather accessory market, i.e.: key fobs, belts, etc. Existing tanning and finishing capacity could then yield higher incomes with these more valuable products.

Rather than immediately infusing scarce investment funds in an attempt to achieve value added products by producing finished leather for the Eritrean leather goods manufacturing industry, the tanning industry may be better served, in the short to mid term, by increasing the export of fast turn-around products such as wet blue hides as outlined above. This would allow future investment in modern leather tanning, processing, and finishing equipment to produce finished leather to be made from retained profits and larger cash flows. Tanneries will then be able to achieve the value adding potential of producing import substitution grades of leather for the local finished leather goods market by basing decisions on the experience gained by their current and future Eritrean clients – experience gained by importing the grades and finishes required by their export clients. That is, after the finished goods manufacturers understand the requirements of their foreign clients, the Eritrean tannery industry can purchase the appropriate machinery to support these requirements - rather than a false start by importing potentially inappropriate equipment today without understanding the product requirements of the final export clients.

B. Sea Fisheries

Overview

Eritrea's unexploited costal territorial exclusive economic zone is estimated at 52,000 square kilometers - about 1,250 kilometers in length excluding more than 350 island shorelines. Around 1,000 species of fish are native with estimated sustainable yield ranging from 50 – 70,000 tons per year.[ix]

Fish is one of the richest known natural resources in Eritrea.[x] Only a small proportion of these marine resources are utilized.[xi] The Red Sea is almost enclosed, unpolluted and very salty with extreme humidity and temperature variations. As a result, the Red Sea is biologically diverse. Commercial-grade fish species include groupers, snappers, jack, catfish, barracuda, queen fish, tuna, kingfish, emperor, grants, sea bream, sole, shark, sea cucumbers, lobster, shrimp, and sepia. Licensed and unlicensed foreign commercial trawler fleets have exploited these fisheries. In spite of this, natural stocks remain high and coral reefs are largely intact but are fragile.

Foreign and/or Eritrean commercial fishing trawlers could yield the fastest short term payoff but the risk of over fishing and reef destruction is high without adequate monitoring. They could deplete vulnerable stocks and could endanger longer-term goals such as export, employment, food security, and tourism (diving and sport fishing). An alternate and sustainable option would be to expand artisanal fishing using smaller vessels.[xii] Artisanal fishing has the highest potential of absorbing mustered out personal, of utilizing local boat building experience, and building skills towards eventual small-scale fleet fishing. This would also allow time for the Ministry of Fisheries to build up on-board fleet monitoring services to insure against fishery and reef destruction as has occurred in other areas of Africa and the Middle East. The Namibia and Indonesia models are a good reference.

Artisanal Fishing

There were roughly 500 registered artisanal fishing boats around Massawa in 1997 consisting of 160 canoes (few meters length, oar powered, 2 fishers) 294 houri (10 meters length, less than 40 HP motor, 5 fishers) and 48 sambukh (15 meters length, 50 HP motor, 7 fishers). Total fishers would then be around 2,100. Lesser numbers of fishers operate in the Dahlak Islands, the Galalo area and other coastal communities.

Catches are maintained fresh using either pounded or flaked ice. Icing is effective for the normal eight hour fishing trip although ice availability is limited. Gillnets or hook and line are normally used.

In 1998 artisanal fishers were able to land and sell close to 2,000 metric tons of fresh fish. Forty percent was exported at a value of at least US$150,000 (lowest of various estimates, excludes unreported exports directly across the Red Sea and Egyptian trawler poaching).
Fishers grade their catch into three categories: grade one for export and grades two and three for the local market. Exporters in turn grade the export grade into their own categories – each has its own criteria.

Local Market

There are at least three fish markets in Asmara. In general, fish into the local market is not identified by species and is uniformly priced. Fish has not been a part of the traditional Eritrean diet but marketing and promotion campaigns by the Ministry of Fisheries has been started and could be supported. Local demand in major urban areas is growing, as more Eritreans understand fish nutritional value and preparation methods. Increased sales will reduce prices to a more competitive level against more popular meats while contributing to national food security.

Export Market

Eri-Fish has a modern plant in Massawa equipped with basic processing facilities and cold room. Artisanal fishers deliver their catch to Eri-Fish docks. Whole, gutted fish are packed and kept frozen until loaded into refrigerated containers for sea transport to the Netherlands.[xiii] The plant was established jointly at a cost of US$1.2 million by the GSE, Italian and Dutch investors in 1998. It currently exports 150 tons of frozen fish every month to final markets in the Netherlands, Germany, and Britain.[xiv] While these markets may prefer whole fish, future opportunities exist for adding value by the production of filleted grades for other regional markets.

Eritrean Maritime Products Company also receives virtually all of its fish from artisanal fishers. It is believed to operate facilities in Assab (?), Massawa, and Asmara. The processing facility ownership is said to be 94% by the GSE and 6% by Norwegian investors and has a daily capacity of 15 tons of frozen fish using a blast freezer – actual export is far lower than this capacity due to degradation of equipment. Exporting is by sea and by air from its facilities in Asmara.[xv]
Osaki Fish is believed to be a joint venture between the GSE and a Sri Lanka investor. Investment was augmented by an Nfa 800,000 local loan. Based in Massawa, they employ 360

fishers and 12 management and administrative personnel. Utilizing ten fiberglass boats, scuba divers harvest sea cucumber from the Massawa area for 100% export to Asian markets. They are planning to expand harvests down the coast towards Assab. This sea cucumber has a value twice that of shrimp. Further investigation would be worthwhile to determine opportunities for additional artisanal supply of sea cucumber.

Seawater Farms Eritrea funded by a consortium of investors and the Ministry of Fisheries. This ambitious shrimp, tilapia, and salicornia aqua farm began to export shrimp to Europe and the Middle East in June 2001. The investors expected exports to total US$3-4 million in 2001, US$10 million in 2002, and US$40-50 million in 2003. Labor availability and other constraints have reduced these estimates considerably. While the stated project goals of integration and philosophy may not be achieved, the core business of shrimp farming (said to be 80% of current income) is more than viable in itself. Their short term to mid term goals include supplying shrimp larvae to artisanal producers – out growers – as well as the expansion of their existing 90 shrimp tanks to 330 tanks. Each tank is three hundred square meters and can accommodate up to two hundred thousand post larvae shrimp.[xvi] Market demand is far higher than supply.

Potential Actions and Results

The rapid startup of artisanal fishers and shrimp producers should be encouraged. Benefits would include an increase of fish in the internal market and an improvement of nutrition; increased export and ForEx earnings; an increase of employment opportunities and in the income and standard of living of fishers, handling and processing workers, and transportation and distribution workers. An artisanal approach would be more sustainable and offer minimum environmental impact when compared with fleet trawler fishing.

Support could include training, financing, establishment of supplier biased pricing such as simple auctions, providing market price information by species, and the Ministry of Fisheries consumer education program to increase local demand. Meetings between the fishers, distributors, the exporters, the Ministry of Fisheries, and the fishers trade organizations would be productive in establishing common standards and goals. Income will improve as quality and quantity are adjusted to meet local and international market needs. Production and productivity will be raised through technical assistance and technology transfer, training, and improved access to financial services. Support could be provided to the Ministry of Fisheries to provide vocational training programs for new entrants and to improve present fishers' skills.

Since demand is high, as availability to the market increases, private investors will have the incentive to increase capacities and value adding processing and packaging with little need for GSE funds. From a 2000 export level of around US$1 million, the short to mid term yield from artisanal fishing and shrimp culture might stabilize in the range of US$7 – 12 million.[xvii]

C. Vegetables and Fruits

Overview

Interviews with a few dozen farmers, bankers, development workers and consultants revealed the export of vegetables and fruits to the Saudi Arabian market as the goal of virtually every agricultural project. However, market studies show that opportunities today may not be as they were in the past.

The Saudi government has cut costs by reducing subsidies for cereals grown within the kingdom. Water rationalization schemes have reduced water allocations to basic grains. In turn, the irrigated grain farms have turned to field scale vegetable production resulting in massive increases in supply and corresponding reductions in imports. The largest declines in vegetable imports are potatoes, tomatoes, cauliflower, green beans, cucumbers, pumpkins, and egg plants. Saudi production of vegetables for local consumption has risen from only 65% of demand in the early 1990s to 85% at the end of the 1990s. This trend appears to be continuing into the 2000s. Local producers are now exporting surplus vegetable production to regional customers such as Qatar, Bahrain, and Kuwait.

Vegetables are produced throughout the year in greenhouses and in open fields in the winter. Unfortunately, peak harvest times in Saudi Arabia – a time when prices are at their lowest – coincide with Eritrean peak harvest seasons for many crops.

The Saudi government has given local product preferential treatment in the produce auction markets selling local production first followed by imports. Accordingly, many buyers have made their purchases and have dispatched their trucks when import production is auctioned later in the morning. The Saudi government has also formed a new marketing company that buys directly from local farmers and sells their produce through 19 new centers throughout the nation. The middleman for local production is thus eliminated while the import middleman remains.[xviii] Imports are still made from Syria, Lebanon, Egypt, Turkey, Iran, the USA, and Holland. In the past, imports from Arab League countries entered duty free while imports from other nations, such as Eritrea, incurred a 12% duty. This practice has been changed and now non-Gulf Arab nations such as Egypt also incur this 12% duty. Past practices of understating the value of imports in order to reduce the impact of duty costs has been eliminated in vegetables through the use of per unit duties.

Eritrean exporters would incur other costs as well. Importers typically charge a 5% commission. Any new supplier would have to sell at prices reduced by, say, 10% in the first year and 5% in the second year in order to establish market demand for their produce. Costs such as sea and air transportation and port handling costs are higher as well – Saudi Arabia does not allow refer containers to leave the port area.

Among the fruits produced in Eritrea, only oranges and bananas are produced in sufficient quantities for volume export to the Saudi market. As with most vegetables, fruit prices at the Asmara market are higher than in the Jeddah market. In the long term, as Eritrean production and supply to the local market is increased and local demand is satisfied, opportunities may open. In the short and mid term, export of these products does not seem likely.

Attempts and investigations have been made to export bananas from Eritrea to Saudi Arabia. Problems have included quality of local produce (ex farm and transport damage from poor or

non existent packaging), less desirable varieties of bananas, and difficulty in assembling sufficient quantities to fill a refer container or ship's refer hold.[xix]

Opportunities

Interest has been expressed in Eritrean onions by Saudi importers. A 1999 FAO study found Eritrean red skinned cultivars suitable to the market. Eritrea's production period is out of phase with Saudi's production cycle with peak import prices from December through April. Prices of US$265 per ton compare will with Asmara market prices. More current market studies should be done. If still desirable, this product could provide the basis to establish Eritrea's identity in the Saudi market as well as providing a basis for adding other product lines.

A different opportunity exists for the establishment of Eritrean small-scale, high quality vegetable farms. Substantial air imports continue undiminished from Europe and the USA into the luxury markets such as specialty shops, hotels, restaurants and caterers. Products to be investigated include iceberg lettuce, red lettuce, endive, broccoli, fennel, vine ripened tomatoes, celery, and green peppers.

Bananas and oranges comprise 75% of Saudi fruit imports. However, early trials are under way in Eritrea in growing quality table grapes and strawberries. Further trials in the production of high quality mangos and melons on small-scale farms could yield products most suitable for the Saudi market. As with specialty vegetables, these products would establish Eritrea's reputation as a quality supplier in the Saudi market and provide opportunities for adding other product lines in the future.

D. Ornamental Crops

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[i] "Eritrea Export Development Strategy", World Bank, January 2000
[ii] Untitled, undated, un-credited report based upon Ministry of Trade and Industry sources, 2002 (first section headed "A. World Trend in Livestock and Human Population")
[iii] "Eritrea Industrial Statistics 1998", Ministry of Trade and Industry, December 1999, ISIC 1911: Tanning and dressing of leather; Exchange rate of Nfa 7.3/US$ from "Eritrea Country Report June 2002", Economic structures, Annual indicators, The Economist Intelligence Unit Limited 2002.
[iv] "Eritrea Export Development Strategy", World Bank, January 2000
[v] Visit and interview; Mr. Semere Petros, General Manager of Petros Araya Tannery and Chairman of Eritrean Leather Association; August 2002
[vi] "Eritrea Industrial Statistics 1998", Ministry of Trade and Industry, December 1999, ISIC 1911: Tanning and dressing of leather; Exchange rate of Nfa 7.3/US$ from "Eritrea Country Report June 2002", Economic structures, Annual indicators, The Economist Intelligence Unit Limited 2002.
[vii] Visit and interview; Mr. Semere Petros, General Manager of Petros Araya Tannery and Chairman of Eritrean Leather Association; August 2002
[viii] "Eritrea Industrial Statistics 1998", Ministry of Trade and Industry, December 1999, ISIC 1911: Tanning and dressing of leather; Exchange rate of Nfa 7.3/US$ from "Eritrea Country Report June 2002", Economic structures, Annual indicators, The Economist Intelligence Unit Limited 2002.
[ix] "Invest in Eritrea, A New Country with Diversity and Wide Range of Opportunities", Eritrea Investment Center, January 2000
[x] "Dahlak Artisanal Fishery Development Project", Rural Enterprise Unit, October 2000

[xi] "Indicative Trade: Transport Flows Between Eritrea and Its Neighbors and the Challenges of Contraband Cargo Traffic", Bereket Araya, undated (circa 2000)
[xii] "Eritrea Export Development Strategy", World Bank, January 2000
[xiii] Visit and interview, Eri-Fish, August 2002
[xiv] "Eritrea Country Commercial Guide FY2002", The U. S. Commercial Service, December 2001
[xv] Information supplied from consultant Iyob Tesfu
[xvi] Visit and interview, Seawater Farms Eritrea, August 2002
[xvii] Various interviews
[xviii] "The Saudi Arabian Market for Eritrean Fruit and Vegetables, FAO, February 1999
[xix] Interview with Mr. Mulugheta Berhe G., Manager, Eritrean Fruits Export P.L.C., August 2002
"A Report on Banana Growing in Eritrea", Gal Or, State of Israel in collaboration with USAID, June 1996

ANNEX G

Enterprise Development Sector Assessment - by Kiflemariam Zerom

ANNEX G

1. Enterprise Development Sector Assessment

A. Rural Enterprise Unit (REU)

1. Background

The underlying justification for the establishment of the Rural Enterprise Investment Partnership (REIP) program was the need to contribute to the development of the capacity of Eritrea to generate income and foreign exchange for purchase of essential capital and consumer goods. An important area in this context was thus recognized to be the giving of support to the development of agriculture and private agribusiness in order to increase agricultural produce for domestic consumption and for exports and at the same time to serve as the basis for improving rural income and food security. The areas that were selected to be suitable for REIP support for private enterprise growth are the lowlands in the south west and along the Red Sea littoral. The REU was as a result established to operate as the REIP program planning and administration center and to be responsible for coordinating assistance to rural enterprises and facilitating linkages between assisted enterprises and the Commercial Bank of Eritrea (CBER).

2. Current Setting and Work Plan

2.1 Current setting

The REIP program was basically designed to provide financial assistance to SMEs in order to enhance their base capacity and non financial assistance for improving their managerial and technical capacities (BDS) through the REU. The REU, in its present form, is however ill equipped to manage its mandated responsibilities effectively and efficiently. It suffers from both quantitative and qualitative shortcomings and particularly from lack of adequate professional staff. Nonetheless, it is still striving, although at a much reduced scale, to discharge its responsibility of facilitating client enterprise request for loan from the program's REIP/EIF and the development and implementation of technical and direct assistance projects.

2.2 Work Plan

The Work Plan of the REU for 2002 comprises the provision of the following services:

- services for the provision of the financing needs of EIF Clients;
- non-financial assistance services;
- enterprise capacity building assistance (ECBA);
- participation in a training program for cooperative promoters;
- provision of direct assistance to a date farm project;

- contingency plan for the provision of technical assistance to a project proposal to export sunflower seeds.

The basic features of the above planned activities of the REU are briefly detailed hereunder.

2.1.1 Services for the provision of the financing needs of EIF Clients refer to professional loan and application packaging, that is, helping clients of the credit scheme with a) the preparation of their business plans, b) the appraisal of the viability of prepared project feasibility studies, and c) the packaging of loan applications;

2.1.2 Non-financial assistance services are aimed at addressing the following constraints of SMEs, namely, a) low knowledge and skills in business management, b) poor technical know-how of the operations they run, c) undeveloped infrastructure, practically surrounding all of the emerging industries, and d) endemic marketing through the resourceful use of the expert inputs of consultants having solid backgrounds in both project development and the technical issues surrounding the selected target industries and by selecting two sub-sectors, i.e. poultry keeping and horticulture.

2.1.3 Enterprise capacity building assistance (ECBA) project is geared to improve the business talents and capabilities of Eritrean entrepreneurs in general and SME entrepreneurs in particular through two types of training programs, namely,

a) IYB training program in order to strengthen and consolidate their management knowledge and skills in a number of management function areas i.e. marketing, record keeping, stock control, buying, costing and financial planning.

b) Non-IYB training program to (i) enhance the knowledge and skills in the development of start-up and expansion projects; (ii) improve capacity in the management of labour in general and the proper handling of labour relations issues in particular; (iii) introduce targeted small entrepreneurs to the effective management of tax policy issues.

2.1.4. Participation in a training program for cooperative promoters involves the provision of technical and direct assistance to emerging farming and artisanal fishery cooperatives.

2.1.5 The provision of direct assistance to a date farm project is aimed to help start the commercial operation of the farm by promoting the successful launching of the project with the mediation of the provision of direct assistance to the farmer, intended to transform and strengthen the technology of the farm's irrigation process and of its farming practice.

2.1.6 The contingency plan for the provision of technical assistance to a project proposal to export sunflower seeds involves the provision of possible technical assistance services that the select group of contract growers may need to meet fully the stringent requirements of the contractual agreement they will enter into with the buyer.

3. The Way Forward

Once the problems it is currently faced with are alleviated, hopefully within the not too distant future, the REU looks forward to the efficient and effective execution of its basic mandate, that is, to facilitate client enterprise request for loan from the program's REIP/EIF and to contribute to the development and implementation of technical and direct assistance projects. In this endeavor it envisages to pursue, or give due emphasis to the provision of, the following services :

- business development service partly directly and partly through the deployment, as appropriate, of external consultants and organizations;
- technical assistance by organizing tailored training programs and assistance on the field, again through the cooperation or full deployment of external experts;
- business management training both in connection with starting and improving businesses;
- market information services by conduction surveys, sectoral studies etc.
- market support services including quality assurance, packaging and related services;
- general business information and referral service including with regard to business licensing, identification of suitable consultants;
- giving support to the strengthening of private consulting firms;
- giving assistance in the environmental assessment of projects, and
- monitoring and evaluation of the program.

It needs no underscoring that the above envisaged task is a 'tall' task which requires proper staffing and equipping. Appropriate and timely steps would thus have to be taken to build up the REU capacity in order to ensure improved performance in the execution of its envisaged program. Short of this it would be logical to redesign the envisaged program in line with the realistic capacity of the REU by exploring at the same time possibilities for strengthening it, and when found appropriate or necessary, through external collaboration.

All said it must be realized that the "raison d'etre' which initially led to the establishment of the REU is, to a large degree, still valid. Hence there exists a need for strengthening the REU to discharge its responsibilities in light of the objective realities obtaining in the country.

B. Agricultural Enterprise Development

1. Agricultural sector overview and development strategy

Agriculture, animal herding and fishing are the main source of income and food for a large part (60%) of the Eritrean population. Of the total output of the sector, roughly, 40% is contributed by staple crops, 30% by cash crops, 10% by livestock, and the balance, 20%, by forestry and fisheries. However the agricultural sector still accounts only for about 16 percent of Eritrea's GDP and about 20–30 percent of Eritrea's current merchandise exports.

Farming and animal husbandry are predominantly based on traditional techniques, i.e. using animal-drawn implements to till the land; resulting in low productivity per worker as well as per unit of land. Moreover, the agricultural sector is in general characterized by unpredictable weather conditions and wide seasonal input and product prices fluctuations. The government is pursuing a three–pronged strategy for the development of the sector (SOE, Transitional Economic Growth and Poverty Reduction Strategy, 2001-2002.):

a) expanding land under cultivation,;
b) increasing yields; and
c) encouraging production of higher–value crops for export or domestic consumption.

The first strategy, i.e. expanding land under cultivation, refers to the efficient use of about 1.6 million hectares which Eritrea is claimed to have and which appear to be suitable for rainfed or irrigated cultivation, but are not currently farmed; particularly in the western lowlands where the soil is fertile and stable, rainfall is relatively more reliable and application of modern cultivation and management methods is possible.

The second strategy, i.e. raising yield of agriculture, aims at developing new water resources and using known water sources more effectively. It is based on the fact that Eritrea lacks perennial lakes, ponds, rivers and streams that can be channeled for seasons with low rainfall.

The third strategy, i.e. encouraging production of high-value commodities, involves encouraging farmers to produce high–value crops and livestock products for export as well as to produce goods that can be used as raw material for industry and high–value cash crops for domestic consumption that can substitute for imports.

2. Successful agricultural enterprises

The major vegetables that presently grow in Eritrea comprise tomato, onion, pepper, potato, cabbage, okra, pumpkin, cabbage, and swiss chard; fruits include banana, orange, lemon, papaya, guava, mango. Their geographical distribution is as follows:

S. Keih Bahri	Vegetable	tomato, onion, pepper, potato, cabbage
	Fruit	orange, lemon, papaya, guava.

Anseba	Vegetable	onion, tomato, okra, pepper, potato.
	Fruit	orange, guava, mango, papaya
Gash Barka	Vegetable	onion, tomato, okra, pepper, pumpkin
	Fruit	banana, orange, guava, lemon, mango, papaya
Debub	Vegetable	tomato, potato, onion, pepper, cabbage
	Fruit	orange, papaya, guava, banana
Maekel	Vegetable	potato, tomato, cabbage, swiss chard
	Fruit	guava, papaya

Animal husbandry activity in the country mainly consists of raising poultry, goats, sheep, cattle, pigs, camels, donkeys and horses.

Some agricultural enterprises or farms have been visited for assessing their performance and future prospects. See Table 4.1 below.

Table 4.1: Agricultural enterprises visited

	Name	Location	Activity
A.	**Anseba Region**		
1	Elaberet Farm	Elaberet	Dairy, citrus, vegetables
2	Adal Poultry	Keren	Poultry
3	Juffa Farm	Keren	Citrus, vegetables, sheep fattening
C	**Gash Barka Region**		
1	Gash Agriculture	Tessenei	Banana, citrus, cotton, vegetables, dairy, cattle fattening
2	Gash Agro-industry	Tessenei	Cotton, vegetables
3	Sinit Agro-industry	Tessenei	Cotton, vegetables
6	Segid Farm	Tekreret	Banana, citrus, vegetables
7	Tekreret Farm	Tekreret	Banana, citrus, vegetables
8	Aligidir Farm	Aligidir	Cotton, sesame, vegetables, sorghum

The enterprises which have been visited are in the majority of recent establishment. Those in the Gash Barka area have been severely affected by the recent conflict with Ethiopia, both in terms of property damage/loss and human resource dislocation. Notwithstanding the unexpected moral shock and economic setback experienced the owners of these enterprises are now working hard to make up for the loss sustained and to lay sound foundations for a better and hopefully more secure future.

There is a general impression that the enterprises visited are generally promising. However it needs no underscoring that they are still riddled with several constraints and problems. See Section below.

3. Constraints to competitiveness of agricultural enterprises

The major constraints to the competitiveness of agricultural enterprise include:

- soil degradation and erosion;
- inadequate rainfall;
- insufficient farm laborers;
- lack of skilled workers;
- lack of capital;
- difficulty in credit access;
- inadequate transport, particularly feeder roads and air cargo;
- lack of or limited technical support and extension service;
- difficulty in accessing to agricultural inputs;
- insufficient market information and marketing support;
- lack of or inadequate business advisory services;
- lack of training schemes; and
- lack of handling and packaging services.

The above constraints or problems are more or less applicable with varying degree to all agricultural enterprises presently operating in the country. Thus they will need to be effectively addressed in order to ensure the successful operation of the on-going agricultural enterprises and to facilitate or attract new investment. The steps that will need to be taken in this connection will need to be properly planned and executed through the deployment of both local and external resources.

4. Agricultural sub-sectors with competitive potential

Various agricultural sub-sectors and related agriculture-based activities have been considered in order to identify those with competitive potential given Eritrean realities in terms of attaining food security goals and economic growth and development in the context of the global competition. The activities considered include the following:

- vegetable farming
- banana growing
- citrus growing

- vegetable processing
  - tomato ketchup and paste
  - drying of tomato
  - drying of chillies

- ornamentals (cut flowers)

- fruit processing
  - fruit juices
  - jams

- poultry

- sheep and cattle fattening
- dairy
- fishing
- bee keeping

- cotton growing
- sesame growing
- sorghum and millet growing

Other economic activities which have been considered to be also of interest to pursue in the Red Sea littoral and the western lowlands are:

- salt and
- gum arabic harvesting.

The above sub-sectoral listing was examined from a number of angles including quick response to food security needs, effective contribution to income generation, meeting unsatisfied local demand, promoting exports, import substitution, etc. The sub-sectors which were accordingly selected to be with promising economic growth potential are, to start with, he following:

- poultry
- dairy
- cotton
- horticulture
- ornamentals
- fruits and vegetables
- animal fattening (live animal exports)
- fisheries

3.1 Poultry

Poultry production is becoming nowadays a popular peri-urban commercial and family micro-business. This is mainly due to the growing demand for meat, chicken and eggs. The prices currently being paid for these products are very high; beyond the affordability of the middle income group, let alone the lower income groups. Thus poultry production will need to be further encouraged (through the supply of chicks, feed and medication at reasonable prices, etc.) in order to temper the current soaring price trend and thus partially alleviate increases in the cost of living, to contribute to food security and to provide particularly lower income groups and women with additional source of income.

3.2 Dairy

Similar to poultry production, dairy is also a peri-urban commercial and family micro business. It is also not well developed. As a result there is shortage of fresh milk and dairy products. Again the prices paid for the products are very high. Appropriate and

timely measures will thus need to be taken to develop the dairy industry through the training of small-holder farmers in dairy husbandry; supporting dairy farmers and associations, cross breeding with highly productive breeds (e.g. Holestein) and establishing milk collection infrastructure.

3.3 Cotton

In the past Eritrea used to grow large quantities of cotton through commercial farming (Algidir Cotton Plantation) and out growers and several farmers. It was however disrupted during the armed struggle period. Efforts exerted to redress the situation after the liberation of the country have been once again curtailed due to the recent conflict with Ethiopia. Nevertheless it still remains to be an economic sub-sector that will need to be expanded through technical support to farmers and associations and the facilitation of the marketing of the product.

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Horticulture

3.4 Ornamentals

Commercial ornamental (cut flower) production and trading is of recent origin in Eritrea. Its future appears to be quite promising. However it is an economic activity which will have to be nurtured closely in order to penetrate successfully international markets for cut flowers on a sustained basis. Among the measures that will need to be taken in this connection, provision of technical support and access to air cargo at reasonable (competitive) prices stand in the forefront.

3.5 Fruits and vegetables

Eritrea was well known in the past for its banana and pepper exports. Thus resumption of production of these high value crops on a large scale offer opportunities for higher farm incomes and export earnings. Other high value horticultural crops like papaya, citrus, mango, okra, onion, tomato, etc. offer also opportunities for commercial farming where irrigation possibilities are available. Thus it is a sub-sector to be properly developed. However it has several constraints which need to be removed or alleviated. These include mainly bulk transport facilities, packaging, and market information.

3.6 Animal fattening (live animal exports)

Eritrea has substantial potential for increasing its livestock production and exports. This could be achieved through production diversification, quality improvement and enhancing market opportunities for various animal products. Livestock producers thus require support and advice in management and marketing, obtaining market outlets, and in widespread use of refrigerated transportation services for perishables.

Livestock also displays a number of interesting features. Livestock development could possibly be started on small-scale projects with genetically improved cross-breeds.

Combined with improved management mainly feeding, these cross- breeds are likely to give significantly higher yields than the local livestock. Improved management system of feeding, if introduced at a higher scale, could lead to improved nutritional standard among the population through increased consumption of milk/meat/eggs and increase income for the livestock owners. It could also present opportunities for people to earn some money as suppliers of fodder: grasses, leaves hay, etc.

Development of livestock is also considered to increase plant production by using animal by-products, such as organic manure.

3.7 Fisheries

Eritrea's 1,200 kilometer coastal waters are said to contain the most productive fishing grounds in the Red Sea. High–value species such as lobster, shrimp and crap offer considerable potential. Additionally prospects for expanding artisanal fishing and establishing viable inland–water fisheries are also being explored. Fishing activity thus deserves proper attention in as much as it can contribute significantly to food security and to the provision of employment opportunity and thus source of income to a large portion of the population in the area.

4. Findings and conclusions

As can be noted from the above there are various areas of economic potential which can be considered for SME development keeping in consideration the objectives of food security, raising incomes and improving the export trade balance of the country. However it would not be possible or practical to address the above identified long list of possibilities within a short span of time given Eritrea's currently available human, material and financial resources. It would also be necessary to prioritize the short-listed economic sub-sectors by giving due consideration to their relative immediate impact on improving the livelihood of the Eritrean people and the Eritrean economy in general.

The economic sub-sectors which have been accordingly identified for priority consideration are the following:

- poultry
- dairy
- vegetable (and fruit) growing
- animal fattening
- fishing

Future growth in the agricultural sector requires addressing the major constraints limiting production and productivity – low and uncertain rainfall and poor irrigation facilities, poor investment in rural infrastructure and weak/undeveloped rural private institutions, low per- capita land availability and land degradation. The country is drought prone with average annual rainfall between 200 mm and 700 mm.

Private institutions in the form of input supply and marketing agencies and financial institutions have not yet emerged. Supply of modern inputs like fertilizer and pesticides at present is the responsibility of the Ministry of Agriculture. Some farmers groups and cooperatives are being organized. These could eventually take over the responsibility for input procurement and distribution.

High value horticultural crops like banana, onion, papaya, tomato, peppers, eggplant, okra, citrus and mango offer opportunities for commercial farming where irrigation facilities are available. Progress in production of these high value crops offer opportunities for higher farm incomes and export earnings.

Progress was made in expanding access to markets through the construction and improvement of roads and a major increase in vehicles plying the roads. Finally, all the land was vested in the government under the new constitution but, would be de facto under the control of those cultivating it. The users would be able to recover the investments they made during their tenure by passing on these costs to the next user. Whether this approach will be an effective substitute for a market based on private ownership of land is yet to be seen.

5. Recommendations for improving agricultural enterprise development and the performance of agricultural enterprises

In sum, agricultural policy should proceed on two prongs. The first prong would focus on managing Eritrea's water resources. Efficient use of Eritrea's scarce water resources is probably the key to development of the sector. Strategic choices need to be made here that take not accounts Eritrea's fragile soil. In particular, expansion of area under cultivation and irrigation should be carefully done, and the strategy may well focus more on intensification of agriculture as discussed below.

The second prong would involve development of a sustainable plan for the modernization of agriculture and use of modern inputs that increase productivity in agriculture.

The improvement of agricultural enterprise development calls for a series of concerted interventions. Among the major interventions that would be required to be made the following deserve top consideration:

- proper identification of sub-sectoral areas of investments and determination of viable projects;
- easy access to initial, expansion and working capital credit;
- business management training;
- technical support;
- identification of markets and marketing support.

The intervention scheme that would need to be in place would obviously have to be regularly monitored and evaluated properly, from the viewpoints of performance of the enterprises, their ability and commitment to pay back their loans etc, contribution to food

security, improvement of the incomes of their proprietors and those indirectly associated with their activities, contribution to the generation of foreign exchange etc.

5.1 Proper identification of sub-sectoral areas of investments and determination of viable projects

As already indicated the priority areas for sub-sectoral investment have been identified to comprise: poultry, dairy, vegetable (and fruit) growing, animal fattening and fishing.

These areas of investment will have to be further studied in depth from a number of angles including their business management requirements; the location of the market for the product(s), its size and the marketing requirements of the products; the ideal location (e.g. soil, water, climatic etc conditions or factors) for the investment being considered; its technical and expertise input requirements; the investment volume required and the possibilities for raising credit for partial financing; and last but not least the overall viability of the identified project(s).

Identification of project areas and the determination of the viability of their components are currently being carried out in a haphazard way, with varying degree of professional competence, through the interplay of a number of service providers including consultants, government agencies, etc. The situation thus needs to be redressed so as to render the provision of this much needed service more focused and professionally delivered.

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5.2 Easy access to initial, expansion and working capital credit

One of the major bottlenecks to the development of agricultural enterprises is dearth of capital be it for their initial start up, subsequent expansion and their working capital needs.

The banking system in Eritrea is still in its embryonic stage. It will need to be modernized, expanded to reach all potential customers in the six zobas of the country. Furthermore it should be easily accessible as much as possible to investors seeking investment and working capital credit. It goes without saying that it would need in return to be presented with acceptable loan packages.

The preparation of loan application packages is naturally outside its realm. This has to be prepared by the loan applicant. In the majority of cases, however, loan applicants are faced with difficulties in preparing their own loan packages as per the requirement of the banks. The present setting will thus need to be rectified through appropriate intervention measures, including the strengthening of existing institutions which are trying to provide assistance in the field.

Once presented with properly worked out loan packages, the banking sector should efficiently process the loan application and, once determined to be acceptable, make immediately available the requested credit to the applicant(s).

Then it will need to properly monitor the financial performance of the loan beneficiary enterprises in order to ensure the timely collection of their outstanding credit.

5.3 Business management

Prospective owners or management staff of SMEs, as well as those of similar on-going enterprises, would need to be trained in the area of business management, i.e. how to start one's business as well as how to improve it further.

Lack of proper training could lead to mistakes in business decisions and practices which can entail detrimental effects which could be very costly to repair.

Hence there is a need for a timely, efficient and effective intervention in this area. This could be done through the further strengthening and effective coordination of the efforts so far being exerted by organizations like the REU as well as the Chamber of Commerce and the Employers Federation of Eritrea.

5.4 Technical support

Proper selection of agricultural machinery, implements, tools, inputs etc. is of fundamental importance for the success of agricultural enterprises. Their efficient and effective application is also of equal, if not of more, importance.

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The need for timely and expertise intervention in the field is presently very high in almost all the agricultural sub-sectors under consideration, including poultry, dairy, vegetable growing, fruit growing, animal fattening and fishing.

The technical intervention or support required could vary from product to product and could include the following :

- **poultry:** general training; chick supply (Foumi – Egypt; Rhode Island Red –UK, and other breeds); proper heating arrangement through the use of winter lamps; proper selection of feed - adding grass to feed, e.g. alfalfa and fish meal; proper watering systems (container to protect feed from spoilage and keep water hygienic); electric de-beaking; use of litter (sow dust/rice husk on the floor) so as to keep the manure and urine absorbed; de worming medicine to be occasionally mixed with feed since otherwise egg laying capacity could be reduced; vaccination against common disease; etc.

- **dairy:** general training; proper feeding; cross breeding; use of artificial insemination; (getting semen is cheaper than raising bulls); hygienic shed; grooming/washing of cows; hygienic milking area; proper use of milk machines; establishment of milk collection centers; well equipped pasteurization and packing; establishment of dairy cooperatives and involving effective corporate enterprises like Elaberet estate; outreaching rural and remote producers with essential inputs and efficiently collecting milk in return; etc.

- **vegetable growing:** general training; proper identification and selection of seeds (imported seeds sold by retailers, seeds imported by NGOs originating from various countries, ministry of agriculture supplied seeds); proper land preparation and tilling; introduction of appropriate production technology and practice (fertilizer, pesticide spray, irrigation, proper harvesting time, rotation, grading, packaging); etc.

- **fruit growing:** general training; proper selection of suitable type and variety of seedling; proper land preparation; introduction of appropriate production technology and practice (fertilizer, pesticide spray, irrigation, proper harvesting time, grading, packaging); etc.

- **animal fattening :** general training; proper selection of ideal breeds; proper feed mixing; hygienic sheds; proper medical treatment and handling; efficient means of transport; availability of feed lots and sheds on transport routes.

- **fishing:** general training; identification of high-value species such as lobster, shrimp and crap as well as widely consumed species; introduction of artisanal fishing and establishing viable inland–water fisheries.

5.5 Identification of markets and marketing support

All efforts exerted for the successful investment and operation of agricultural enterprises could end up in vain unless the product reaped is on time and marketed for a reasonable or acceptable price.

This essential determining factors for the sustained successful operation of small scale agri-business are, on the one part, availability of suitable markets for the product under consideration, in terms of size and growth potential, and on the other, the deployment efficient and effective marketing mix for the product. Proper grading, packaging, ripening, transporting of the product as well as its effective promotion among potential buyers and establishment of effective marketing channels are issues which need proper counseling and support as and when necessary.

ANNEX H

SUCCESSFUL SMALL AND MEDIUM AGICULTURAL ENTERPRISES IN ZOBA ANSEBA AND ZOBA GASH BARKA – by Iyob Tesfu

ANNEX H

1. SUCCESSFUL SMALL AND MEDIUM AGICULTURAL ENTERPRISES IN ZOBA ANSEBA AND ZOBA GASH BARKA

1.1 ADAL POULTRY FARM

Mr. Yusuf the husband, his wife, his sister and his son are the four share holders who established this poultry farm. Mr. Yusuf is the major share holder and the manager of the farm. The farm is located in the suburb of Keren. It is about 4 km northeast of the center of Keren.

It has a total area of 3.5 ha. Ato Yusuf and his family started operations in the farm about one year ago. Initially, the farm from its own fund constructed the necessary infrastructure and purchased 2,600 chicks. Ato Yusuf went to the CBER in Keren to ask for loan and the Bank told him to go and meet the Rural Enterprise Unit (REU) office in Keren. That is how came to know about the Rural Enterprise Investment Fund (REIF). He hired a consultant to prepare a 10 years business plan and went to REU with this plan. According to the business plan, in the first year of operation the farm would earn a profit before tax of 64,717 Nakfa and in the 10^{th} year of operation it would earn 650,054 Nakfa.

The business plan was approved and Adal Poultry Farm received a loan of 748,248 Nakfa loan from the REIF. With the loan the farm purchased more chiks and built additional infrastructure and its capacity was increased to 5,000 hens. Ato Yusuf proudly speaks that his farm is making profit and that he is regularly paying his loan.

From the 3.5 ha he has cultivated 2.5 ha and is growing green feed for his hens and vegetables for his family.

The farm gets electricity from Keren. It gets its water requirement from its own well. He uses a water pump to fill the overhead tank and from this tank water flows by gravity to where it is required. The owner manager says that the farm does not have any water problem. He buys feed for his poultry from an animal feed processing plant which is located in Adi Segdo, a suburban center 4 km West of Asmara. The manager says that the feed cost is rather high. He pays including transport 350 Nakfa per quintal.

The manager says that REU did facilitate some technical support for his farm. It has sent him on two occasions consultants to give him technical advice.

With respect to the future plan of the farm, the manager says that he has got interest free loans from his friends. He has used these loans and part of the profit that he had made to purchase more chicks and to build more infrastructure and thus to expand his poultry farm to a capacity of 10,000 hens. The expansion process is already in progress.

The manager says that the main constraint in poultry farm is high cost of processed feed.

1.2 JUFFA VEGETABLE AND LIVESTOCK FATTENING FARM

Juffa Vegetable and Livestock Fattening Farm was established in 1997 and started production in 1998. First it started only as a fruit and vegetables producer and then it expanded to include livestock fattening. The sole owner of the farm, Mr. Ambasager Kifleyesus, though he had some idea on farming and livestock, was a merchant before he decided to invest in farming. He has land of his family in the surrounding area of Keren and he found it wise to start commercial farming in this plot of land.

The land is located about 7 km South west of Keren at an elevation of 1,900 meters above sea level. It has a total area of 3,5 ha.

Initially, he invested from his own source and started farm operation in June, 2000. Later he needed more investment to make a real commercial farm and started to look for a loan. The owner manager came to know about the RELF through the mass media. He said that one-day while he was watching television in his home, someone started to give explanation on rural development in Eritrea. He listened attentively and came to know about REU and REIF. The next day he went to the REU office in Keren. He fulfilled all of the necessary formalities and with the assistance of a consultant prepared a 5 year business plan of his farm. As per the business plan, he needed a total investment of 227,140.00 Nakfa . He had 121, 799 Nakfa from his own source and asked for a bank loan of 105,341 Nakfa. On December 31st 2001, he got the loan from the RELF.

According to the business plan, this farm would make profit before tax for the first year 35,456 Nakfa and by the fifth year its profit would grow to 108,518 Nakfa. The owner manager said that he is making profit.

The farm grows oranges, lemons, guava, okra, onions and tomatoes. The total number of citrus fruits planted is 600 and the cultivated area for vegetables is 15ha.

In livestock fattening the farm so far has 22 cattle and 74 sheep.

The water source of the farm are the two wells that it owns and are located within its own premise. There are two pumps that pump the water to a concrete reservoir of 54 cubic meters capacity. The reservoir sits at high elevation in the farm. From this reservoir, water flows by gravity to the irrigated areas.

There are hills and valleys within the farm. The farm has built terraces and soil bunds on the hill sides to conserve its soil.

Juffa Vegetable and Livestock Fattening Farm presently employs 3 permanent employees and 5 to 8 casual workers.

The farm sells all of its products in Keren and its surrounding. The owner manager has his own vegetable shop (Kudar) in Keren. So far, the owner manager says that he has invested in the farm a total of 430,000 Nakfa.

1.3 SEGHID FARM

This farm is located in Tekreret, in Zoba Gash Barka, about 17 km. North east of Akurdet. The sole owner of the farm is Ato Samson Kibreab, an Eritrean entrepreneur who was deported from Ethiopia. Ato Samson had cotton as well cereal and vegetable farms in Ethiopia. He and his brother, Ato Yoftahe Kibreab- who is also working with him in this farm, have many years of years of experience in irrigation farming. They have also taken courses on irrigation and other farm related subjects.

The total area of the farm is 160 ha. Initially, in 1999 when the farm started operation, Ato Samson from his own fund invested about 900,000 Nakfa to clear and develop the farm and rehabilitate some of the wells that were operating more than 30 years ago in the farm of an Italian entrepreneur by the name of Franco. The farm was faced with two major problems in its first two years of operation.

10 ha of banana and Soya beans that were ready for harvest were totally devastated by kamsin in its first year of production. An export market for the Soya beans was found before it was destroyed. After the Ethiopian army Third Invasion, the inhabitants of Tekreret left their homes for safety and there was no labour to look after the farm and the whole vegetable crops and bananas that were to he harvested were wasted.

Under the Emergency Reconstruction Credit Scheme (ERCS), the farm was given a total of 2.5 million Nakfa (First 700,000 Nakfa and then 1,800,000 Nakfa). The farm has used the money to build infrastructure, machinery and equipment for irrigation and other inputs for improving the quantity and quality of production of the farm.

Out of the 160 ha, it has so far irrigated 85 ha. It has 10 ha of bananas (the farm is now producing Cavendish banana); 1,000 orange trees; 10 ha of tomatoes (watered by drip irrigation); and 3 ha of eucalyptus trees. Vegetable is grown on seasonal basis. In addition the farm has also stated fattening and rearing sheep. Now it has 200 sheep.

The farm has 14 water wells and 2 km of water pipelines; 3 tractors; 1 truck; 1 backhoe loader; 3 big size water pumps (each 130 hp) and 2 small water pumps (each 20 hp0; a 400 liter capacity manual pesticide sprayer and 2 km length of installed wire mesh fence.

What has been invested in the farm is several folds more than the bank loan it was given. The farm manager says that the prospect for good harvest this year is high and this will help the farm pay its loan in time.

There are 36 permanent employees and 30 – 60 casual workers in the farm. The main problems of the farm are shortage of skilled labour and shortage of fund which is required for digging new wells or upgrading existing wells to supply the water need for irrigating more land.

The future plan of the farm is to focus on the production of banana since according the study that it has made, there is market for banana; the soil of its farm is suitable for banana and the labour force in the surrounding are very much familiar with the production of this fruit. The farm has 2 banana ripening chambers- one in Keren and the other in Asmara.

Nearby Seghid Farm, there is a 70 ha farm that is owned Tekreret Association. This Association has more than 200 members most of whom are farmers or residents of Tekreret. The Association was formed in 1993 and started operation in 1994. It produced mainly banana but due a number of problems it had stopped operation since 1999. Ato Samson is now managing, besides his farm, the farm of the Association on the basis of the agreement he has made with the Board of the Association.

1.4 GASH AGRICULTURAL Plc

This enterprise was established by four Eritreans who lived in Saudi Arabia as refugees and who had come, after independence, to invest and play a constructive role in the development of their country. These four share holders are Ato Semere Kifleyesus (who is the General Manager of the enterprise), Ato Zemui Ghebrebirhan (who is the Farm Manager), Ato Kebedom and Ato Asmelash (who are carrying out the marketing, purchasing, storage, legal and public relations functions of the enterprise).

The enterprise started its agricultural operations by cleaning and developing 1,500 of land near Omahager at a total investment cost of 12 million Nakfa (9.5 million Nakfa from bank loan and 2.5 million Nakfa from its own source). In 1998 due to the border security problem, the owners decided to move their farm Northward. They were given a plot of land near the Fanco stream in the surrounding known as Hashenghewit about 14 km. North west of Tessenei. In this new area they developed they cleared and developed the land and started irrigation system almost in no time.

They grew citrus fruits and vegetables. They had also started a Dairy farm with 170 cattle bought from the Sudan and a sheep-fattening yard with 4000 heads. In the Third Invasion of the Ethiopian army, all of their livestock were looted and the whole irrigation system including the planted trees and crops as well as the machinery and equipment of the farm were totally destroyed or looted.

They applied to be given credit from the Emergency Reconstruction Credit Scheme (ERCS) and CBER, Tessenei branch office gave them a loan of 4 millon Nakfa. With this loan and with their own fund, they started the process of reconstructing and developing their farm in December 2000. As part of this reconstruction program, they purchased 30 cattle and are rehabilitating their Dairy Farm, they have already started selling milk in Tessenei. For their Fattening Yard, they have purchased 1500 sheep.

At present its total farm area in this new site is about 2,330 ha. It has so far irrigated 150 ha of citrus fruits, 250 ha of bananas (It is growing Williams and Grande) and 100 ha onions. It is also

producing various other products such as sorghum (800 ha) using rain fed irrigation. Its long term plan is to irrigate 4,000 ha of land. It plans to water 1,500 ha of the irrigated land from wells and from a 3 million metric cube capacity micro dam which it had just completed constructing. The 2,500 ha land will be irrigated from a big dam (about 34 million metric cube capacity) that is being constructed with the assistance of the Government. This dam, which is fed by the Fanco Stream, will have multipurpose- it will supply water to the commercial farmers, to the farmers in the surrounding communities in general and to the returnees from the Sudan in particular. From this dam, Gash Agricultural Plc will get water by gravity.

At present the enterprise has a total of 120 permanent employees and about 700 casual workers. At its old Ohmajer Farm, it has only a few guards. Its head office is in Asmara (Nakfa Building). It has a branch office and storage halls in Tessenei; and a clearing/ forwarding office in Massawa.

The problem of the farm is first shortage of cash that it needs to mechanize its operations. Its other serious problem is flooding and massive soil erosion along the banks of the Gash River. The soil erosion is bringing the bank of the river closer and closer to its farm.

1.5 GASH AGRO-INDUSTRIAL Plc

Gash Agro-Industry Plc was established by two Eritrean share holders. The main share holder is engineer Aden Suleiman. He is an Eritrean entrepreneur who was deported by the Ethiopian Regime in 1998. He has many years of experience in farm management and trade in Ethiopia. He had a 2000 ha cotton farm in Ethiopia and he claims to have a peak yield of 40 quintals of cotton per ha. He has very valuable experience with the growth or production and marketing of cotton.

The farm is located at Adi Omer (Gursu) about 14 km from Tessenei on the Tesenei Alebu Road. It is only 2 km away from the road on the bank of the Gash River. According to the directions of the Ministry of Agriculture, the farm should have been sited 350m away from the bank of the River but it is now much closer than that. The rational given for its being close to the Gash River is that there was no riverine forest on the side of the bank where it is located and second the owner manager of the farm has promised to the Ministry of Agriculture that he would plant along the bank for 350m or above mango trees or other productive trees that would generate income to the enterprise and at the same time conserve the soil of the river bank.

The farm has planned 3 phases of development. In Phase I, land will be developed for irrigation by water pumps and rain fed irrigation. In Phase II the irrigated land will be upgraded and expanded to 300 - 400 ha. In Phase III a micro-dam will be constructed and irrigation area will be expanded to 600 ha. In this last Phase dairy farm and live stock fattening yard will also be started.

So far the farm has cleared and developed 300 ha of land. Using wells and 5 water pumps it is irrigating about 40 ha of land. The irrigated land is being used for vegetables growth. If every thing goes as planned, a gross income of 300,000 Nakfa per year is expected from the sale of

vegetables alone. About 260 ha of land has been prepared for rain fed irrigation. This year sorghum is sown in this rain fed land.

The Enterprise has 19 permanent employees of whom 2 are females. It hives 70 - 80 daily workers 80% of whom are females. Labour cost is rather high; casual workers are paid 30 Nakfa per day per worker.

Starting from Phase II, the Enterprise plans to grow cotton, gum-Arabic, sunflower and other cash crops. Engineer Adem forecasts that the cotton yield of his farm will be more than 30 quintals/ ha. Part of the irrigated land that will be expanded in Phase III will be used for growing green feed for livestock. In the long term the enterprise will enter into agro-industrial activities such oil production from cotton seeds and other oil seeds and dry tomato as well as tomato paste production.

From the loan that the Enterprise has taken from the Rural Enterprise Investment Fund (REIF) in the CBER branch in Tessenei, the enterprise has a balance of 1.12 million Nakfa that has to be repayed. Besides the amount that he has invested from his own source of fund in this Enterprise, engineer Adem has rented a 600ha plot of rain fed agricultural land near Gherghef. He has sown sorghum in this rented land and if sufficient rain falls in the coming 3 weeks and if his crop is not attacked by pests, he expects a gross income of about 4 million Nakfa from the sale of sorghum.

In terms of machinery and vehicles Gash Agro industrial Plc owns 1 tractor, 5 water pumps, 1 Toyota pick up and 1 Isuzu lorry of 40 quintals capacity. The constraints of the Enterprise include shortage of fund and luck of ginnery in the vicinity

1.6 SINIT AGRO-INDUSTRY Plc

Sinit Agro-Industry Plc is owned by four Eritrean entrepreneurs. These share holders, who also own equal shares, are Ato Fitsum Tesfai (who is also the manager of the Enterprise), Ato Woldu Yohannes, Ato Ghirmay Tesfai and Ato Ghirmay Teklai. All The Enterprise was established in May 1999.

The farm is located about 10 km South West of Tessenei and borders Barka Farm (the big commercial farm owned by Ato Mebrahtu Leghes) and Gash Agricultural Plc. It started its operations in January 2001. From the Emergency Reconstruction Credit Scheme (ERCS), through the CBER Tessenei Branch, it received a loan of 2.5 million Nakfa.

Initially, it had cleared and developed 100 ha of land. At this initial stage grew sorghum, maize, sesame, taff and chickpeas. Now it has expanded to 500 ha of which 150 ha is irrigated and 350 ha is rain fed. It has 7 wells and 7 pumps and uses pipes and ditches or canals for irrigating the 150 ha. In the irrigated area it grows oranges (it has already planted 2000 orange trees), bananas, onions, tomatoes, and livestock feed such as alfafa. In its rain fed land it is growing sorghum and maize.

Sinit Agro-Industry Plc. has also started livestock production and fattening activities. In its dairy farm it has 50 heifers and 25 calves and its sheep rearing and fattening yard, it has 200 sheep and 65 lambs..

The farm has 46 permanent employees and 35 daily workers. This farm also says that labour cost is rather high. It has also started to mechanize its farm. It has 2 tractors, 2 trucks with trailers, 7 water pumps and 1 Toyota pick up.

In future it plans to build a micro dam and expanded its irrigated land.

The main problem of the farm is poor infrastructure. In the rainy season it difficult to reach the farm let alone to drive through road networks within the farm. High labour cost and shortage of fund for micro dam construction are also constraints of this farm.

1.7 ELABERED ESTATE

Elabered Estate is an agro-industrial enterprise composed of the following production units- fruit and vegetables irrigation, a dairy farm, a pig farm, a milk processing plant, and a tomatoes processing plant. The Estate is planning to gradually replace tomatoes production by lime production and stop the tomatoes processing plant.

It has a Dairy farm and its 630 heifers produce about 5,000 liters of milk per day. The milk is packed in ½ liters and 1 liter cartons. The size of the Pig farm is 2,000 pigs; and the pigs are sold to customers live. Fruits (such as oranges, mandarin, mangoes and lemon) as well as vegetables are the main plants are grown in the irrigated land. The vegetables are exported to Saudi Arabia at rather low rate of 300 to 400 kgs per week via Saudi Airlines.

The Estate was first established by an Italian investor more than 35 years ago. It was nationalized in 1975 by the Ethiopian Military Regime (the Derg). After independence its ownership was transferred to the State of Eritrea. It is now operating as a parastatal agro-industrial enterprise and is directed by a Board of Trustees.

The head office of the Enterprise is in Asmara. The farm as well as the processing plants are, however, located in Elabered, Zoba Anseba. Elabered is a small town about 68 km from Asmara on the Asmara Keren road. The total area of the Estate is 1,500 ha but so far only 300 ha are irrigated. 75% of the irrigated land is used for the growth of livestock feed- alfafa and elephant grass. The remaining 25% is used fruit and vegetables production.

The dam and its 6 lakes are the sources of water for the irrigation. To effectively utilize its water resource, in February 2002, the Estate has introduced drip irrigation. It gets its electric power requirement from the Central Grid System of the Eritrean Electric Authority and from its own generator, which is started in cases of emergency.

The total number of permanent employees is 270. There are also about 55 casual workers.

It has a plan to increase its dairy farm heifers and to start production of butter (in large quantity) and yogurt. It will also expand its irrigated land area by 100 ha. It also has a long term plan to start Eco- Tourism. It already has a guest house of 5 to 6 rooms and 3 bungalows. There are many varieties to be watched in the surrounding and the natural eco-system of the area will be attractive to internal and external tourists.

The main problem of the farm is shortage of skilled manpower. It badly needs a Quality manager, a horticulture expert, an agronomist, a veterinarian and two electricians.

1.8 ALIGHIDIR AGRICULTURAL ENTERPRISE

Similar to Elabered Estate, this commercial farm was also owned by an Italian enterpruer (the owner of Asmara Textile Factory which was formerly known as Baratolo Textile Factory) before the Ethiopian Military Regime (the Derg) nationalized it in 1974. Since independence it has been operating under the ownership of the State of Eritrea. As its name implies the farm is located at Alighidir, a small village in Sub zoba Tessenei, Zoba Gash Barka. It is about 10 km West of Tessenei.

The total irrigated area of the farm is about 4000 ha. As part of its Demobilization and Rehabilitation Program after the 30 years of armed struggle that brought the independence of the Eritrea, the GSE has given ex-fighters part of this irrigated land. Each of the fighters had received 2 ha of land. They grow cotton and sell their product to the Enterprise. They also grow sorghum and vegetables.

Cotton has been grown in this land for more than 35 years. Still the main product of the farm is cotton. At present cotton in 2000 ha of the irrigated land. For irrigation the Enterprise gets water from the Gash River. There is a diversion canal at a point about 10 km away from the farm. From this diversion point, which is near the bridge at the entrance of Tessenei, water flows to the farm by gravity. According to the Production Manager of the Enterprise, quality cotton with a fiber length of about 28 cm is grown in this farm. The peak yield has been 23 quintals per ha and this year the Enterprise is expecting a yield of 20 quintals per ha.

In 1997/ 1998 the GSE had installed a brand new Ginnery at cost of about 4 million USD, a briquette making plant. The Ginnery had a capacity of ginning 20 quintals of raw cotton per hour. All of these facilities were completely burned down by the Ethiopian army during their Third Invasion of Eritrea. So now raw cotton is transported about 380 km to be ginned in Asmara. This is a very expensive operation and is adversely affecting the Eritrean textile industry. The Enterprise is now selling in the local market its lint cotton at 1,500 Nakfa per quintal and its cotton seeds at 220 Nakfa per quintal.

Besides cotton the Enterprise also grows sorghum, pepper, sesame and sunflower. It has started fattening and selling livestock. At the moment it has 135 heads of cattle. It has a plan to start a Dairy Farm and a Sheep Rearing and Fattening Yard. It will grow alfalfa and elephant grass required by its livestock.

The Enterprise has a total of 120 permanent employees and 45 contract employees. It employs about 10,000 casual workers. Its need for casual workers is much more than 10,000 but since there is shortage of labour, it is gradually mechanizing its farm operations. For instance, besides labour, cultivators are used for weeding. Recently it has also purchased 2 cotton pickers to assist in the harvesting of its product. It has 66 tractors, 3 bull dozers, 3 excavators, 2 backhoe loaders, 1 grinder, 1 roller, 2 laser levelers, 2 cotton pickers and 2 trucks. Whenever necessary, the Enterprise also rents aircrafts to spray pesticides. It gets its electric power supply from Tessenei. It has also its own generators.

The long term plan of the Enterprise is to increase its irrigated area to 16,000 ha. To adequate water from the Gash River for this expanded irrigation area, it has a plan of building a dam of 150 million metric cube capacity near Haicota town. From this dam water will flow naturally to the farm. The study of the dam was completed in 1997 and it is estimated to cost about 90 million USD.

The main problem of the Enterprise is lack of a ginnery, which is making its cost of production and processing rather high. It has also acute shortage of skilled manpower.